



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Swartz *et al.*  
Serial No. : 10/731,552  
Filed : December 8, 2003  
For : "METHOD AND APPARATUS FOR POST-EXPOSURE  
DETERMINATION OF IONIZING RADIATION DOSE"  
Examiner : unknown  
Group Art Unit : unknown  
Attorney's Docket No. : RRI-001

\*\*\*\*\*

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Mail Stop: Missing Parts, Alexandria, Virginia 22313-1450 on: July 6, 2004.

Attorney for applicants: David Prashker

Signature: David Prashker

Date: July 6, 2004

\*\*\*\*\*

REPLACEMENT DRAWING IN COMPLIANCE WITH  
37 C.F.R. 1.84 and 1.121

Commissioner for Patents  
P.O. Box 1450  
Mail Stop: Missing Parts  
Alexandria, Virginia 22313-1450

Dear Sir:

The Notice To file Missing Parts Of NonProvisional Application Filed  
Under 37 C.F. R. 1.53(b), Filing Date Granted, as mailed March 11, 2004

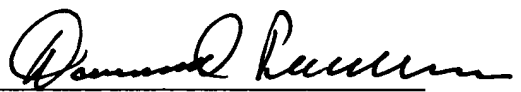
and extended through July 11, 2004, states that the drawing originally submitted are not acceptable for specifically stated reasons; and that a Replacement Drawing in compliance with 37 C.F.R. 1.84 and 1.121 respectively is required.

Accordingly, applicants' undersigned attorney hereby encloses and respectfully submits a Replacement Drawing constituting Figs. 1-31 respectively for the instant application. This Replacement Drawing corrects all the previously-identified defects; and is believed to be in full compliance with 37 C.F.R. 1.84 and 1.121 respectively.

Respectfully submitted,

HAROLD M. SWARTZ  
WILLIAM F.B. PUNCHARD  
PIOTR M. STAREWICZ  
TADEUSZ M. WALCZAK

Date: July 6, 2004  
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Tel.: (978) 525-3794

By:   
David Prashker  
Reg. No. 29,693  
Attorney for applicants

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Fig. 1A

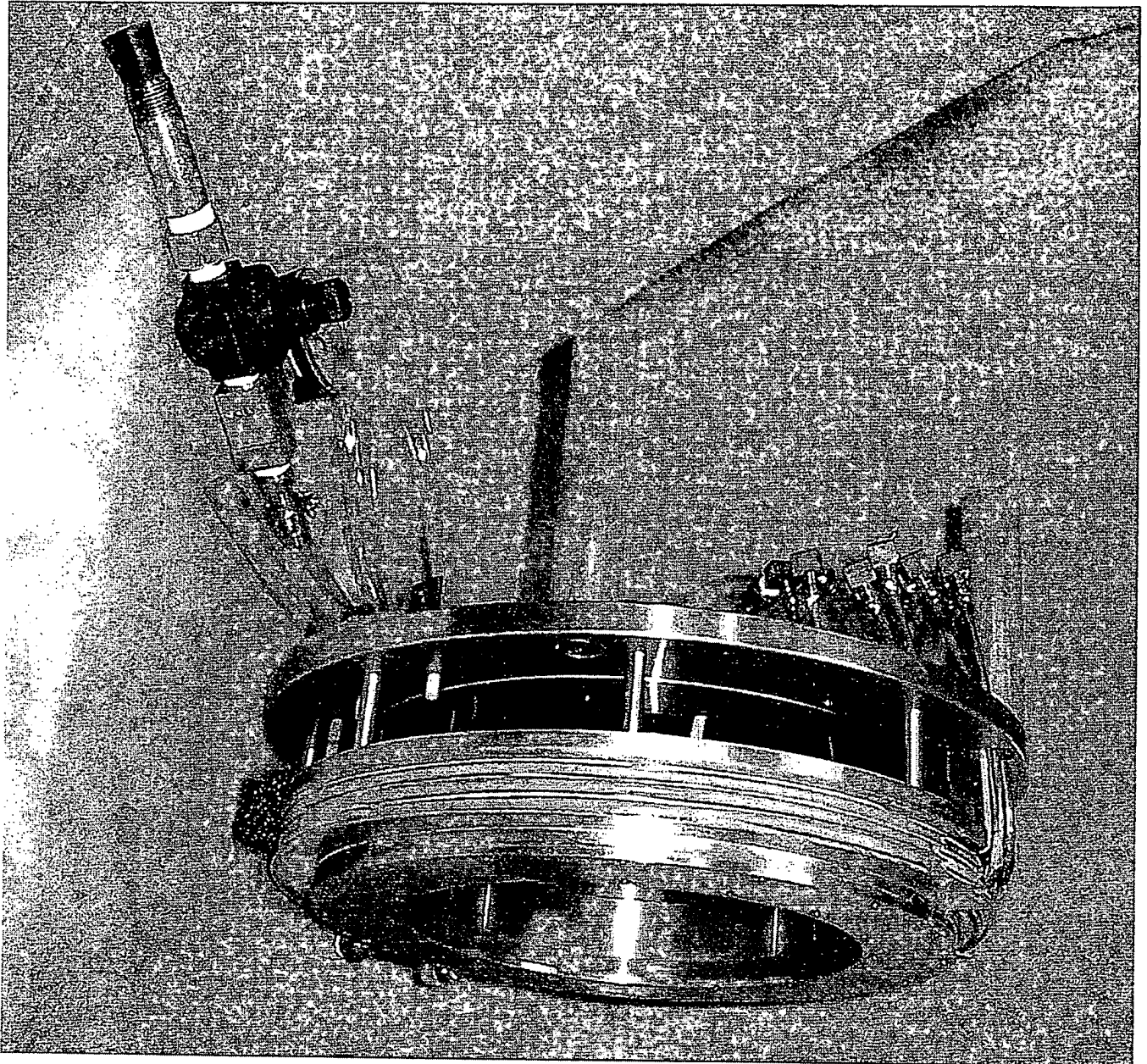


Fig. 1B

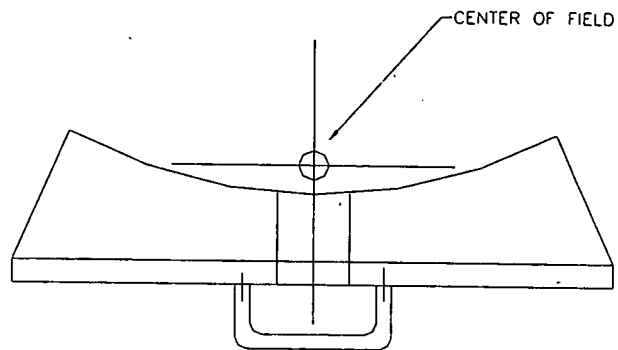


Fig. 1C

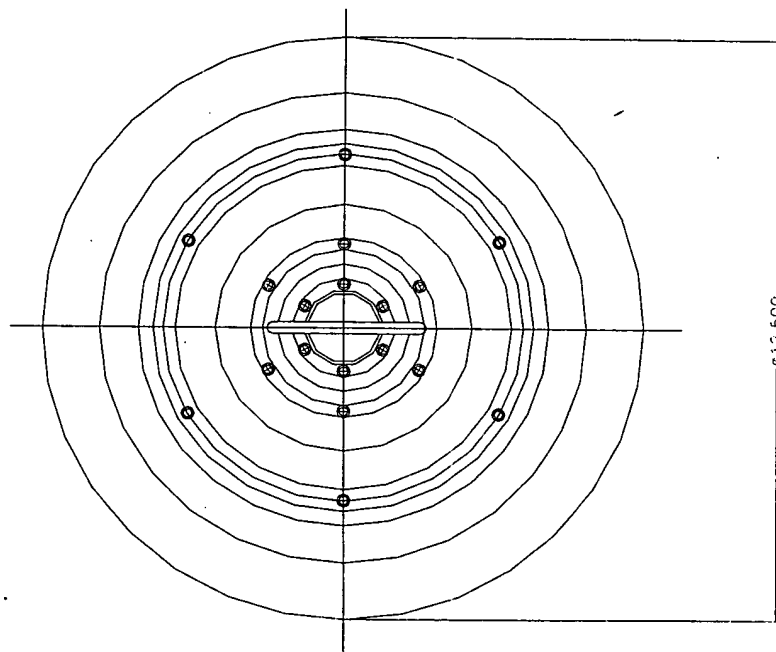
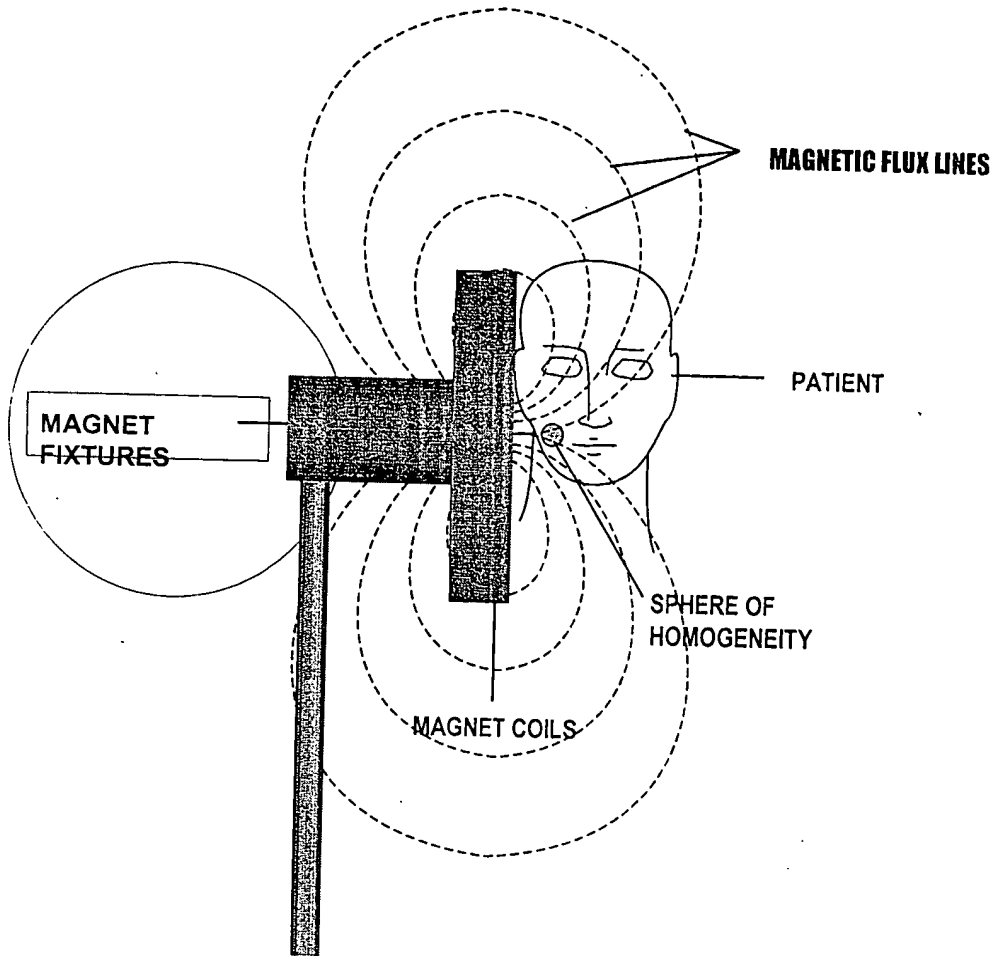


Fig. 2



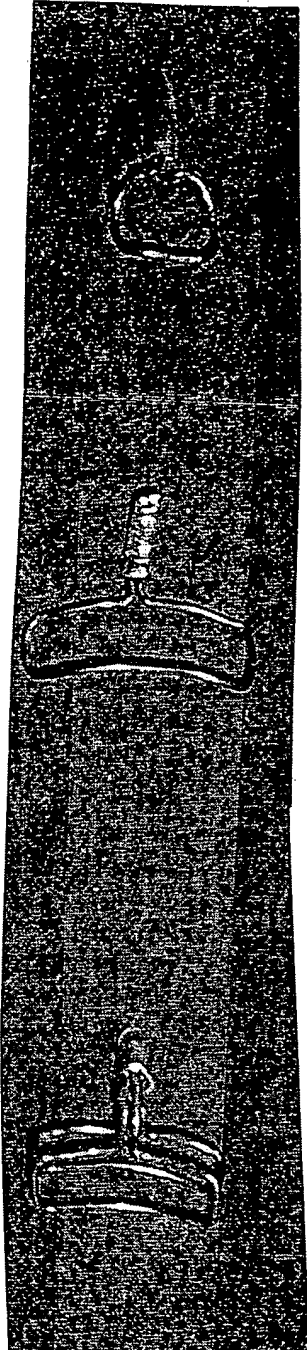


Fig. 3A

Fig. 3B

Fig. 3C

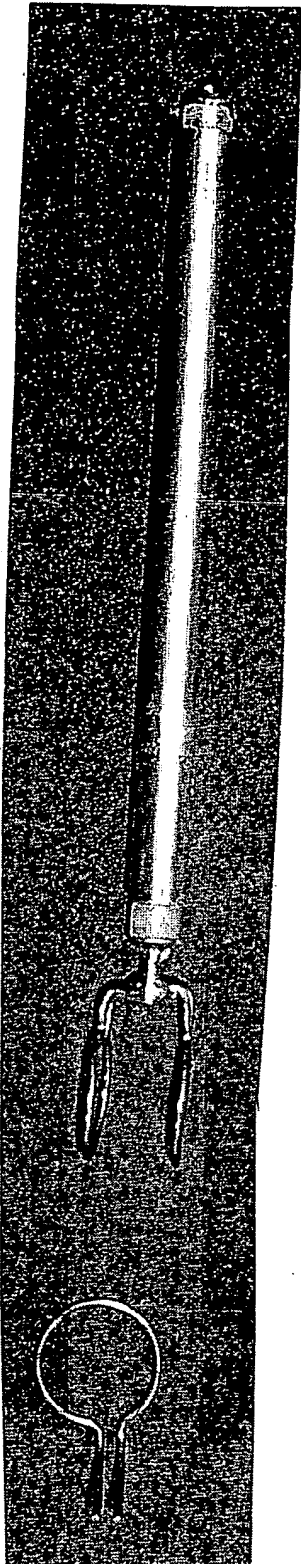


Fig. 3D

Fig. 3E

Fig. 4

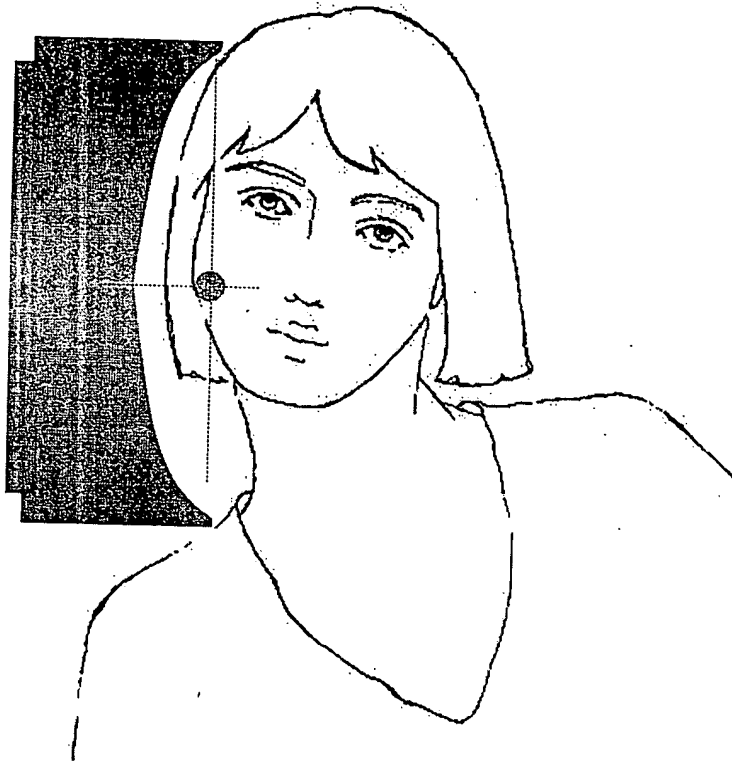




Fig. 5A

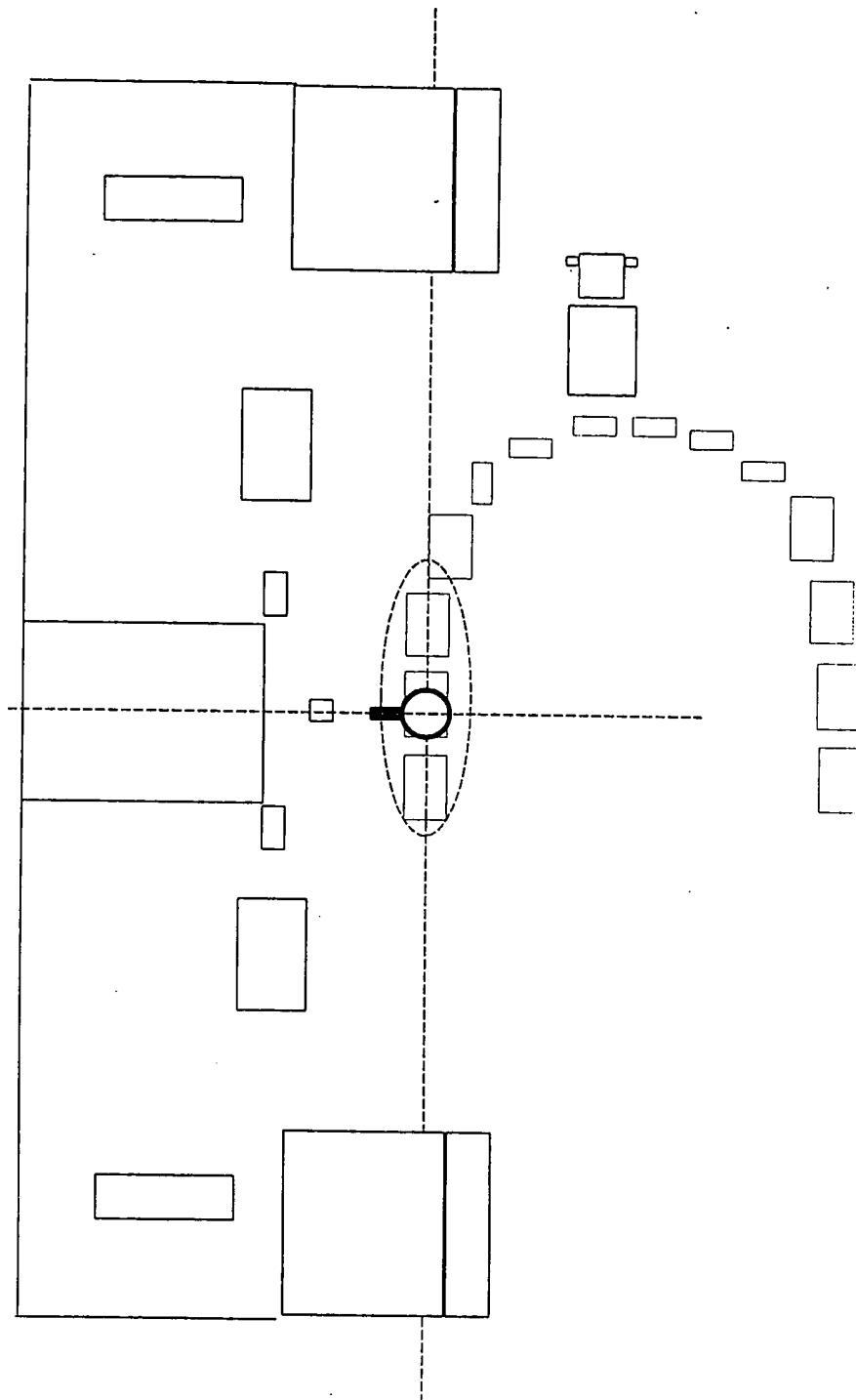
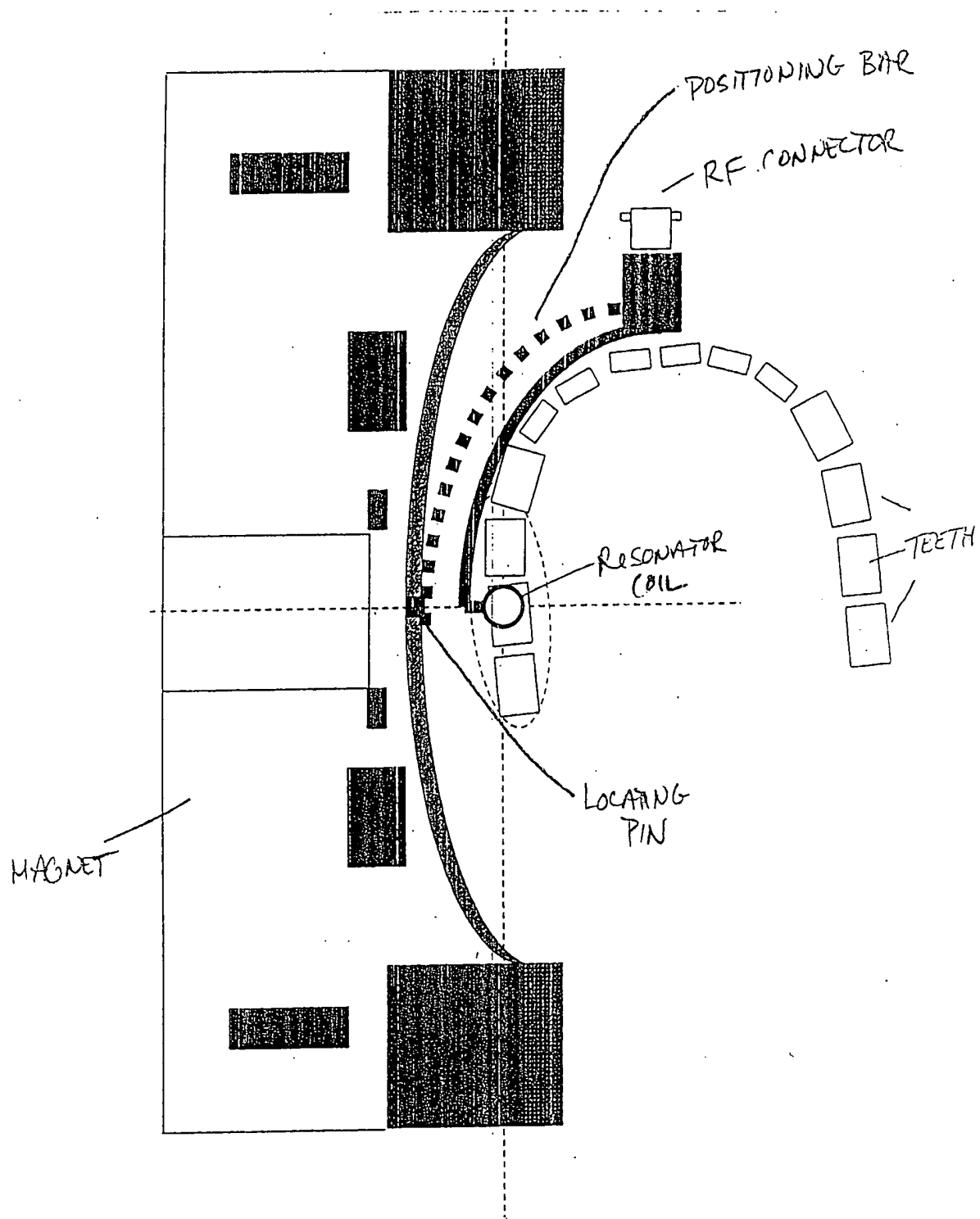


Fig. 5B



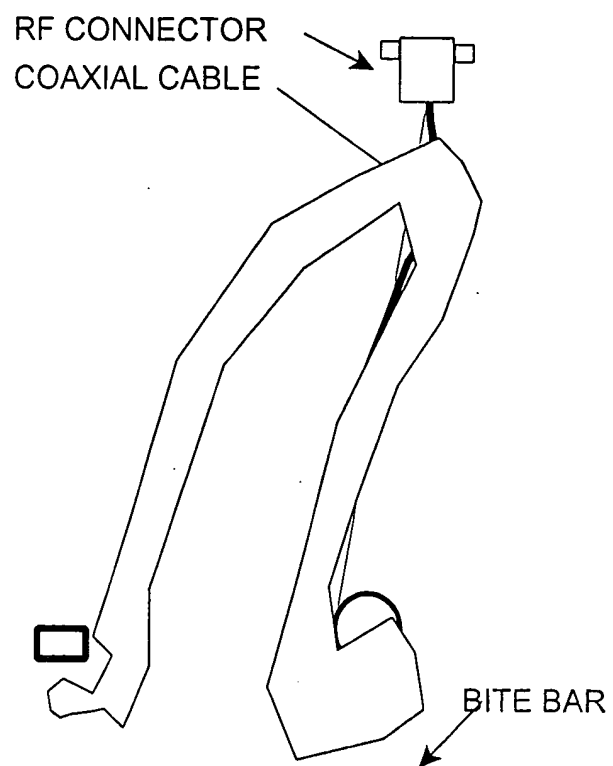


Fig. 6A

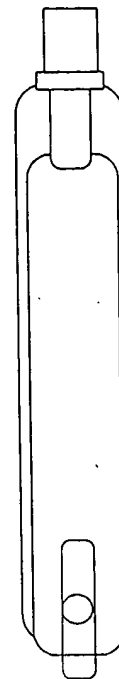


Fig. 6B

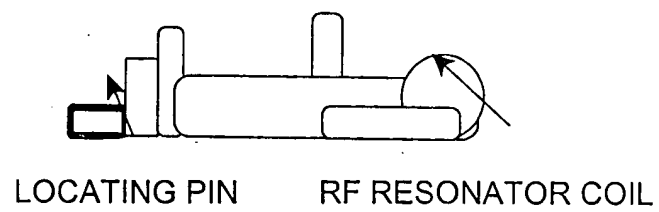


Fig. 6C

Fig. 7A

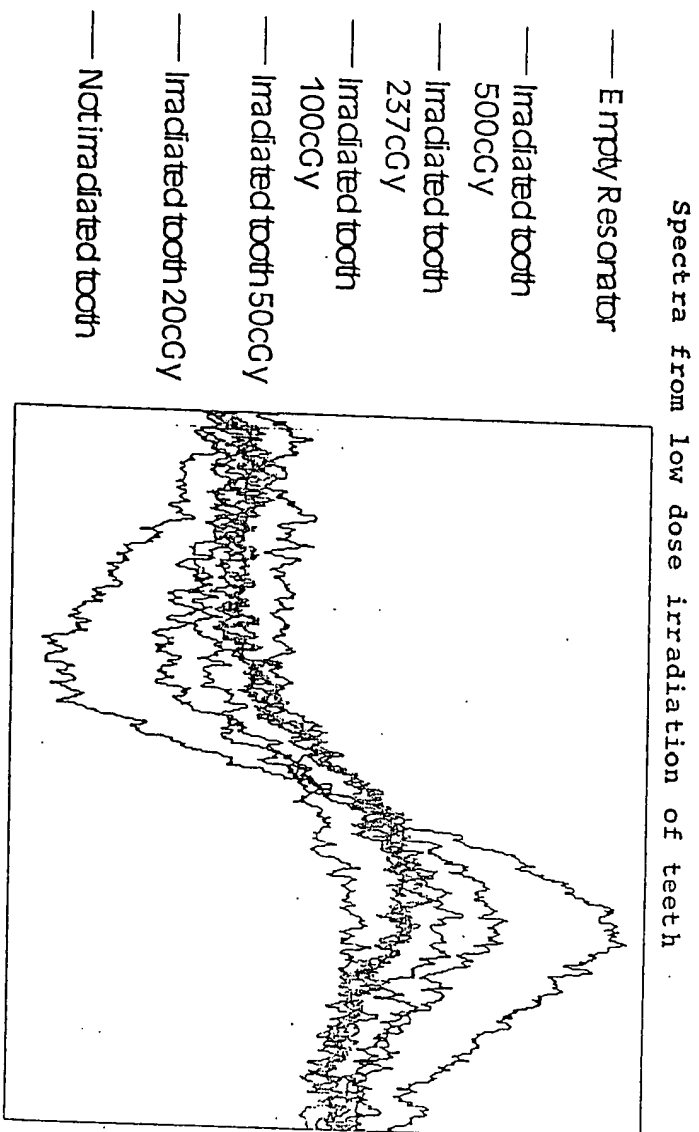
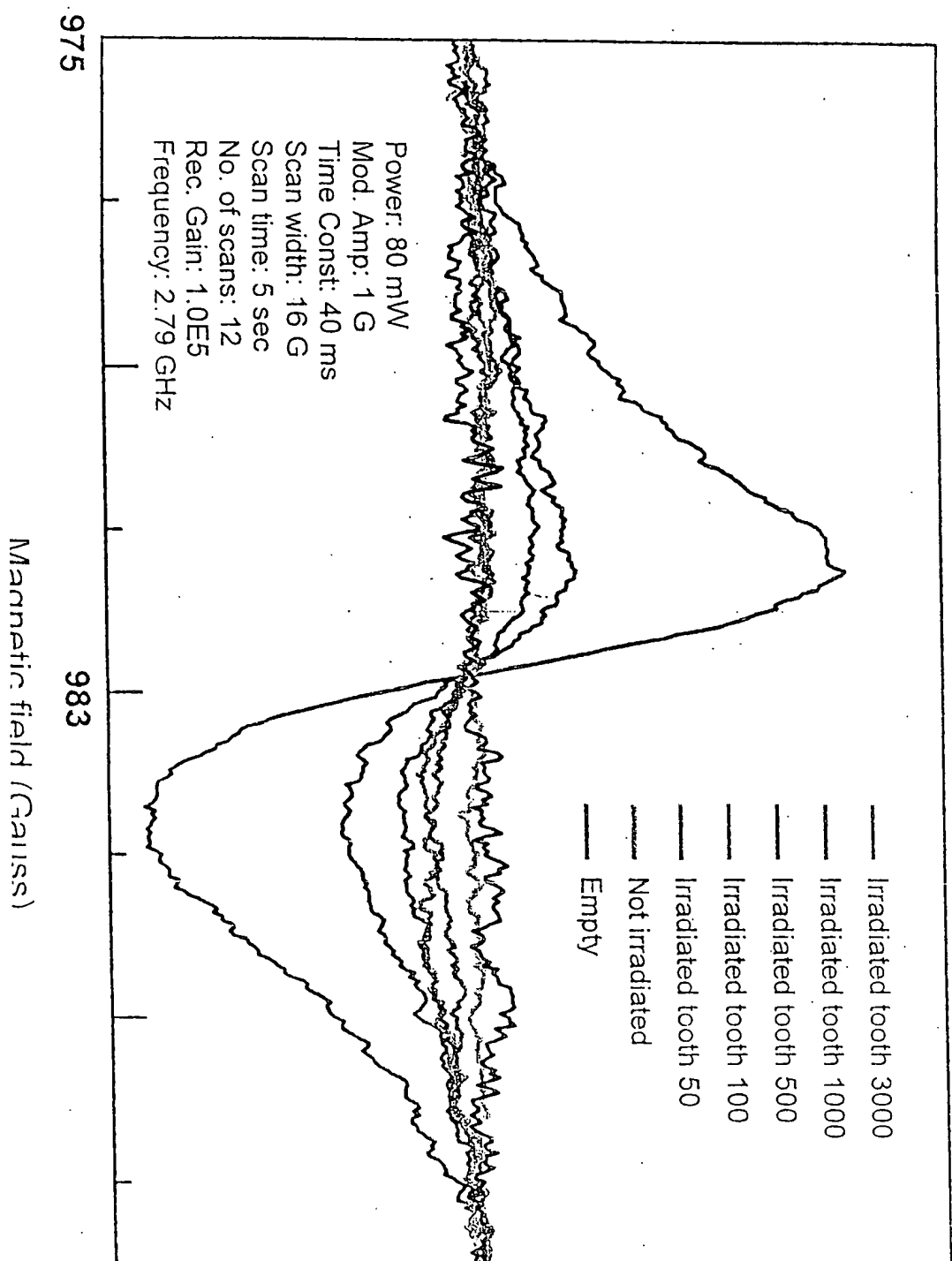


Fig. 7B



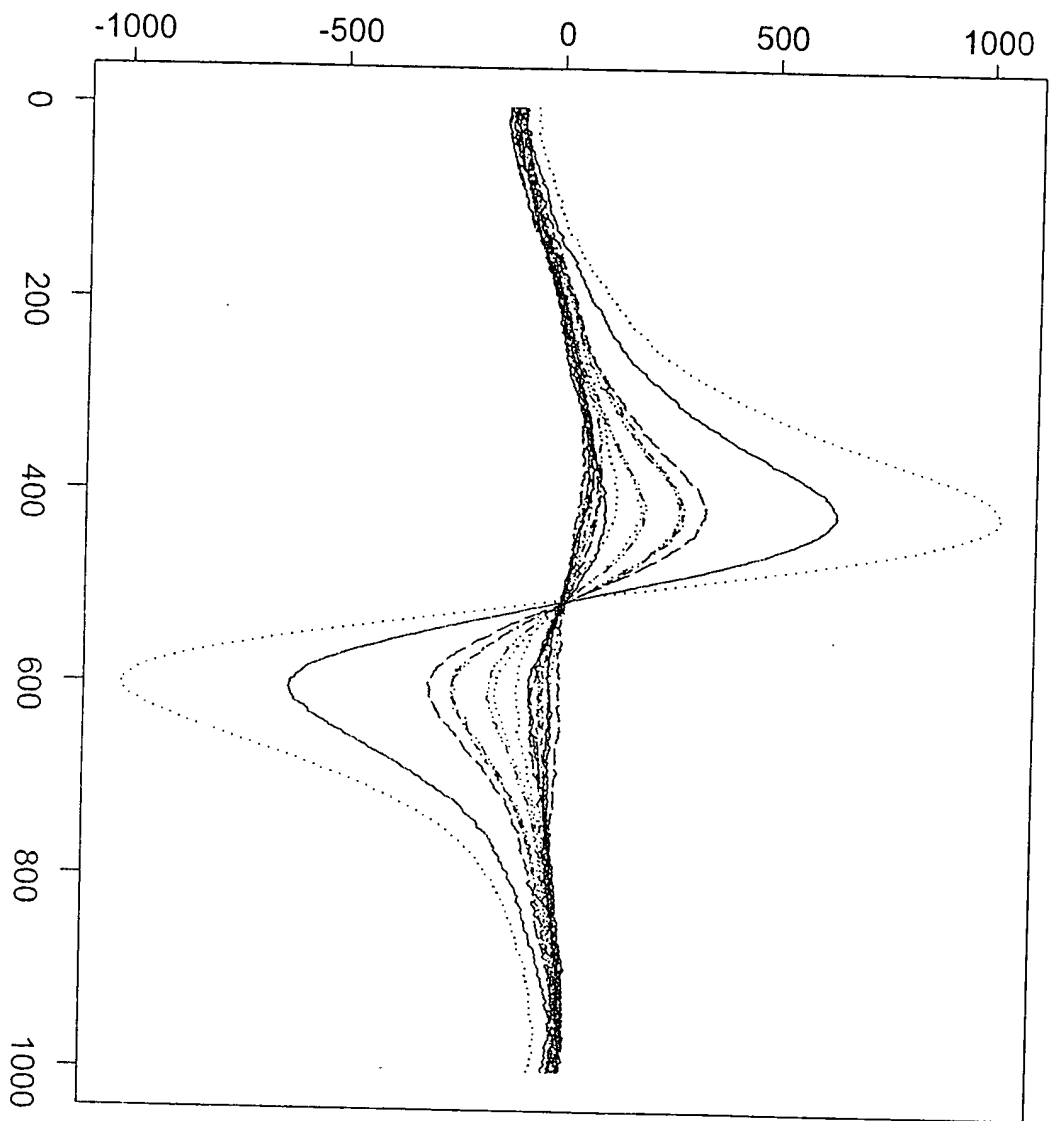


Fig. 8

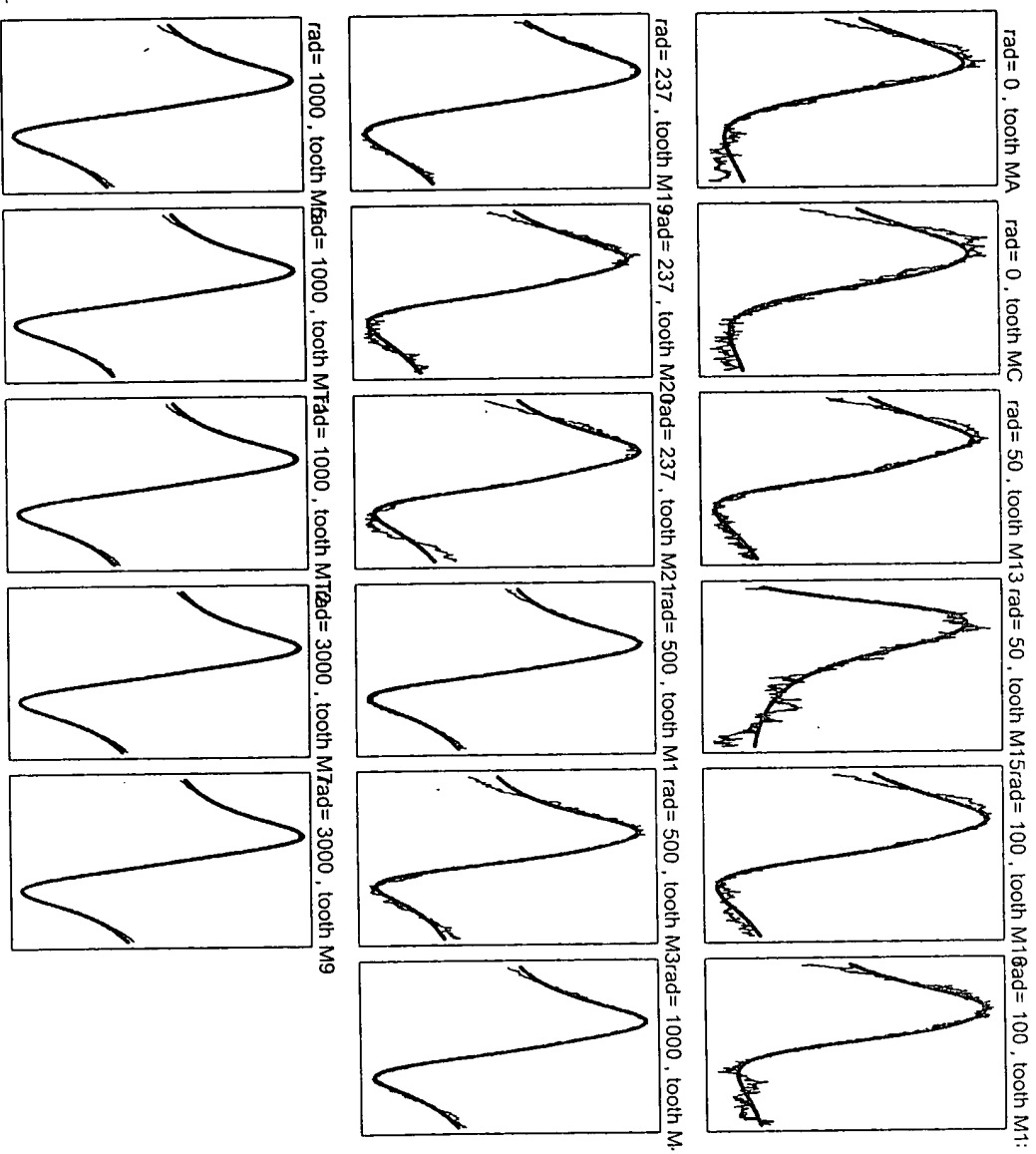


Fig. 9

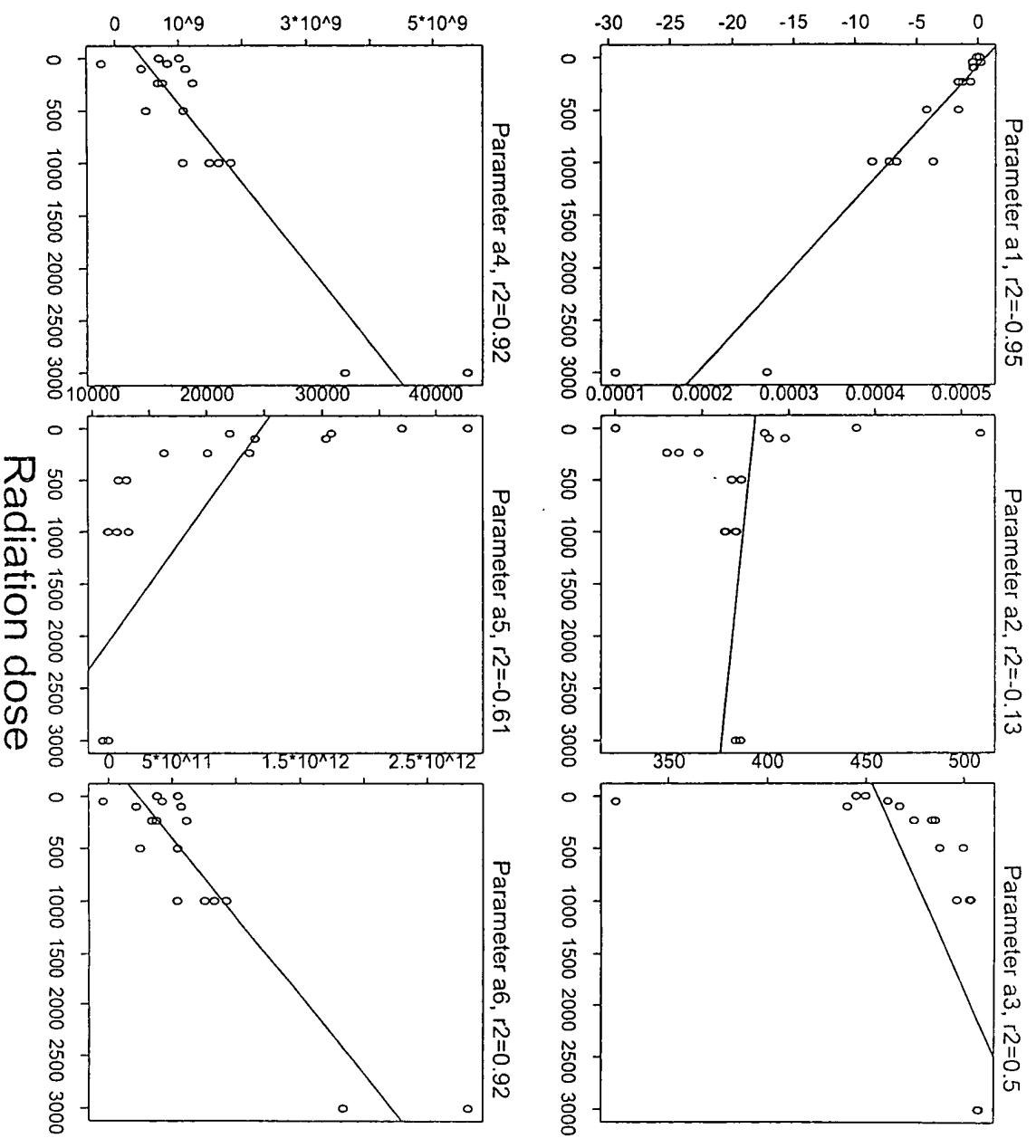


Fig. 10



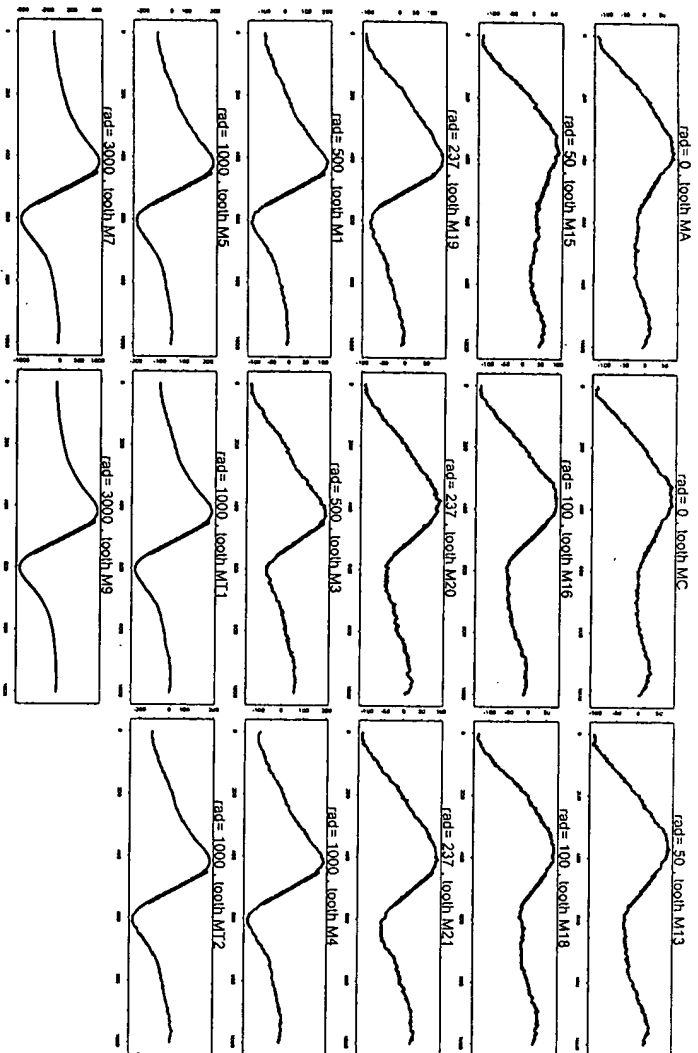


Fig. 11

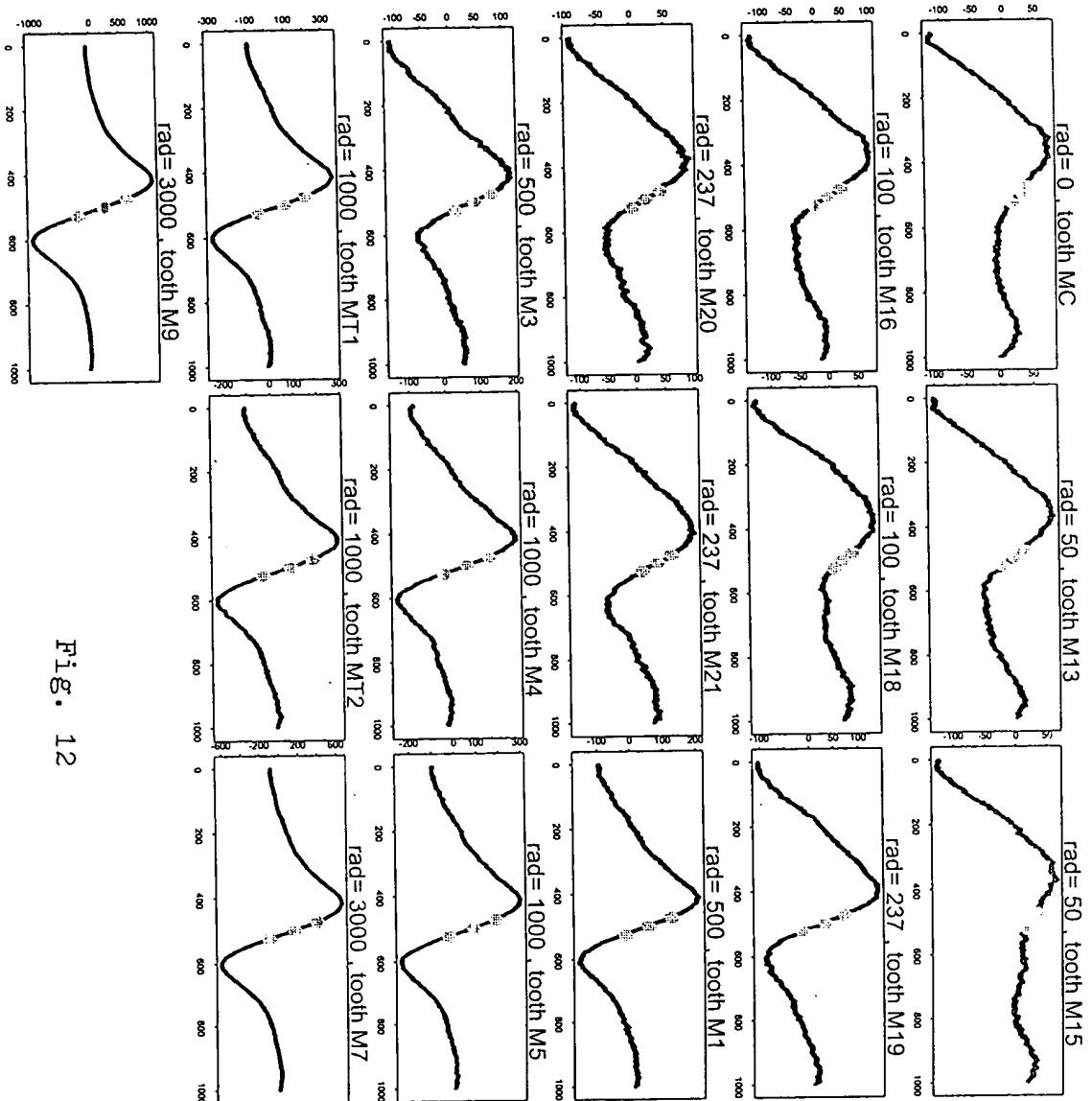


Fig. 12

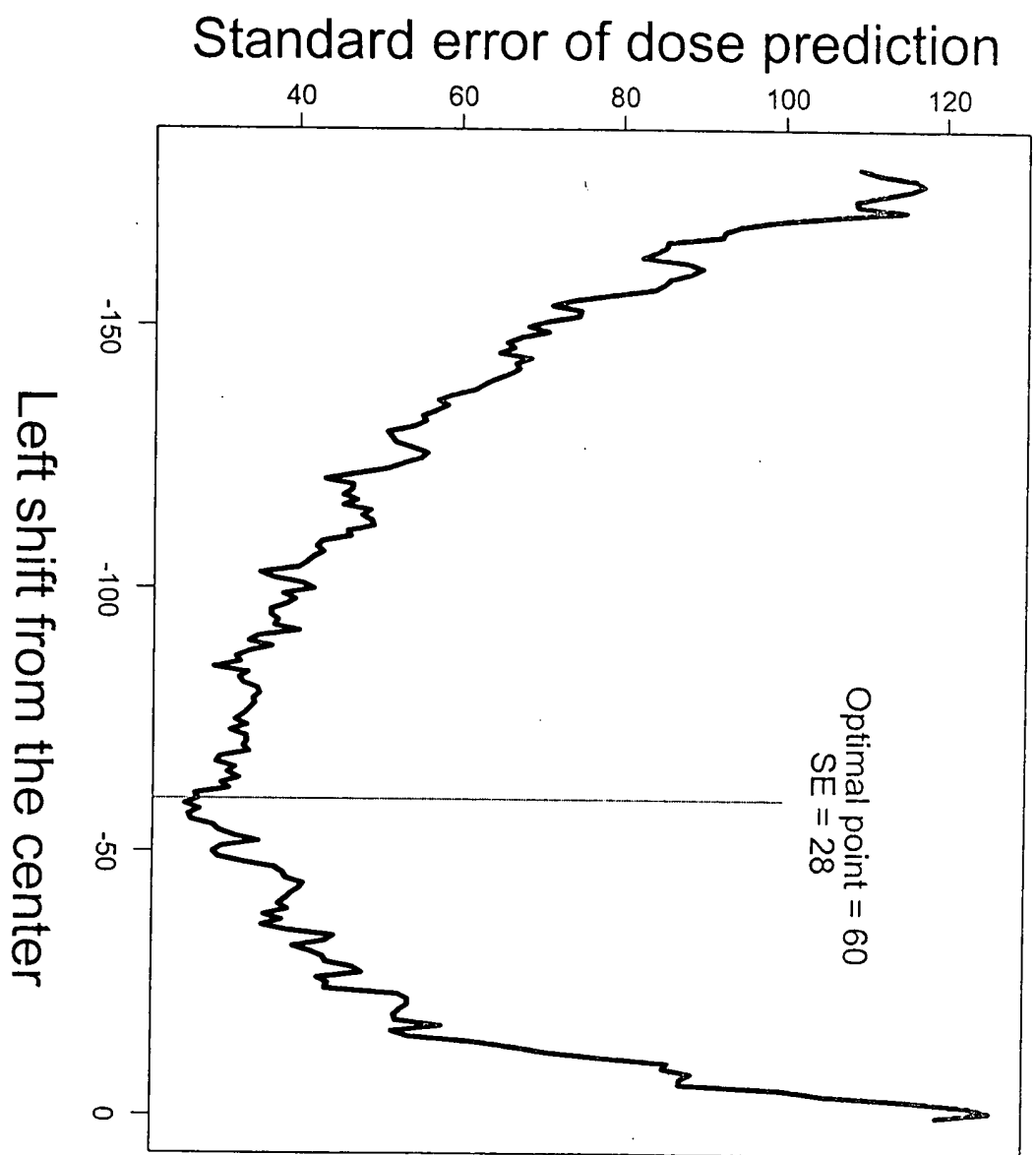


Fig. 13

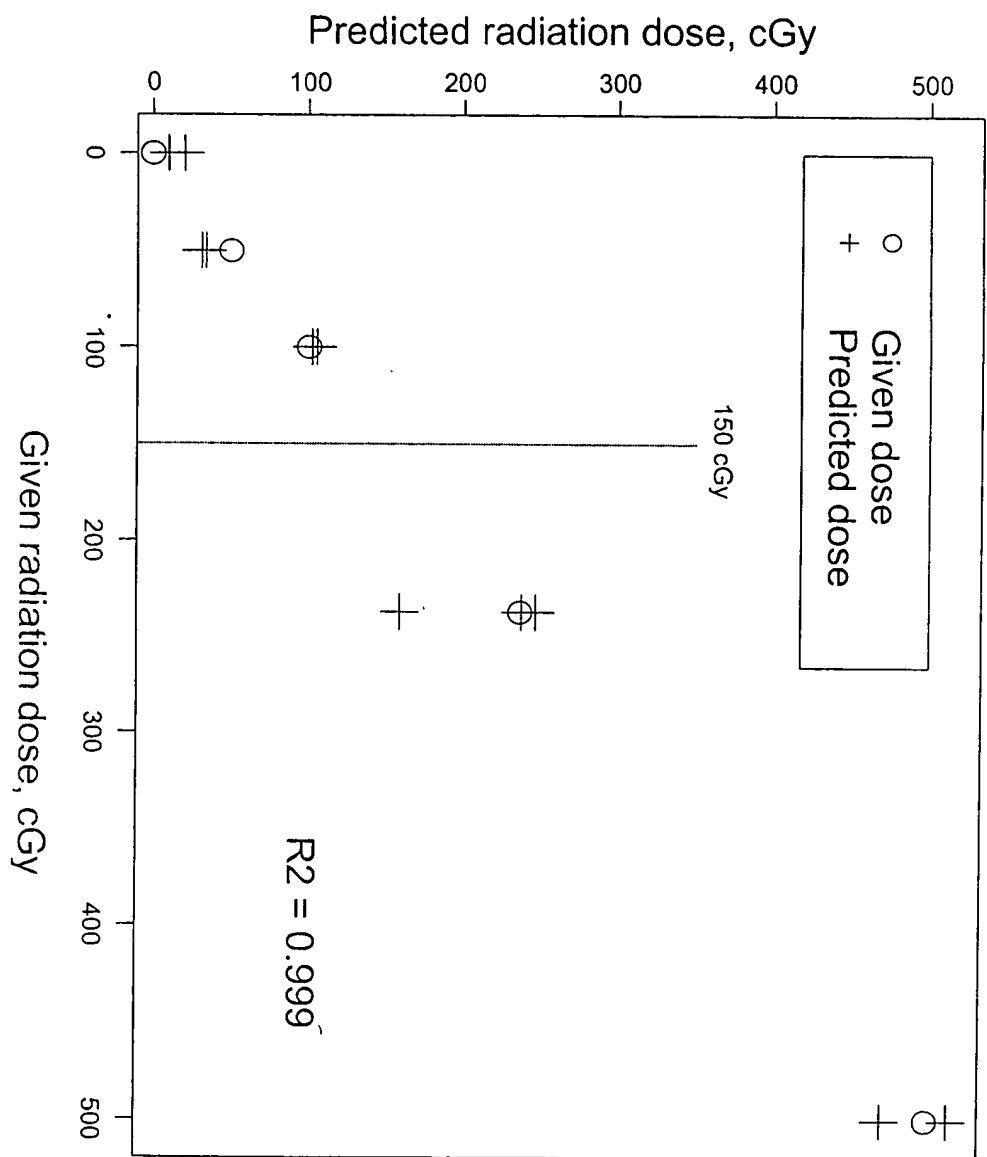


Fig. 14

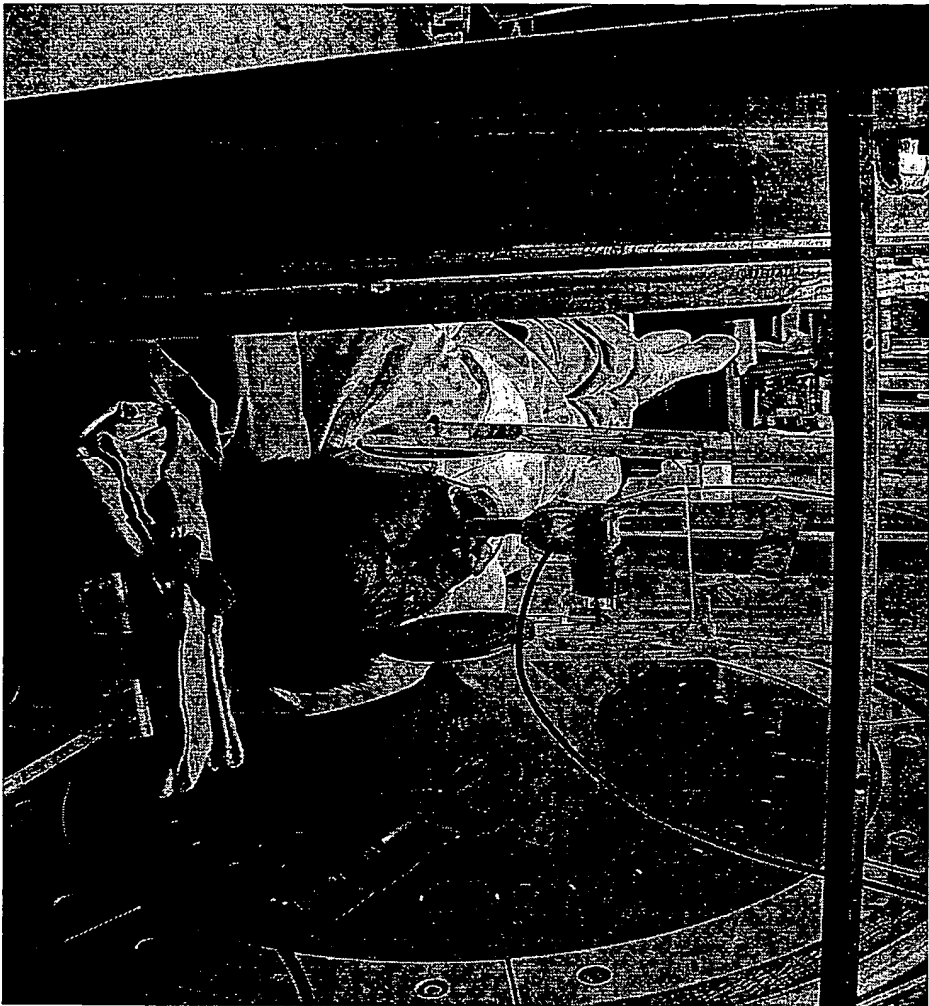


Fig. 15A

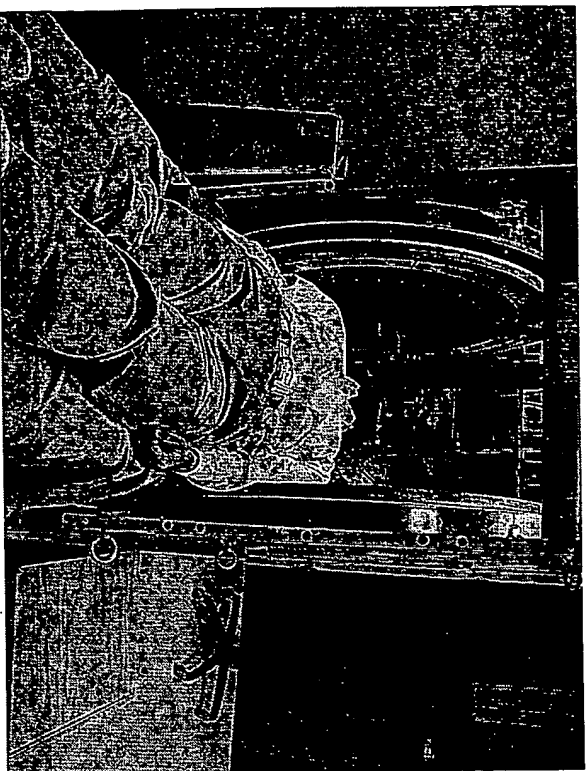


Fig. 15B



Fig. 15C



Fig. 16A

Fig. 16B

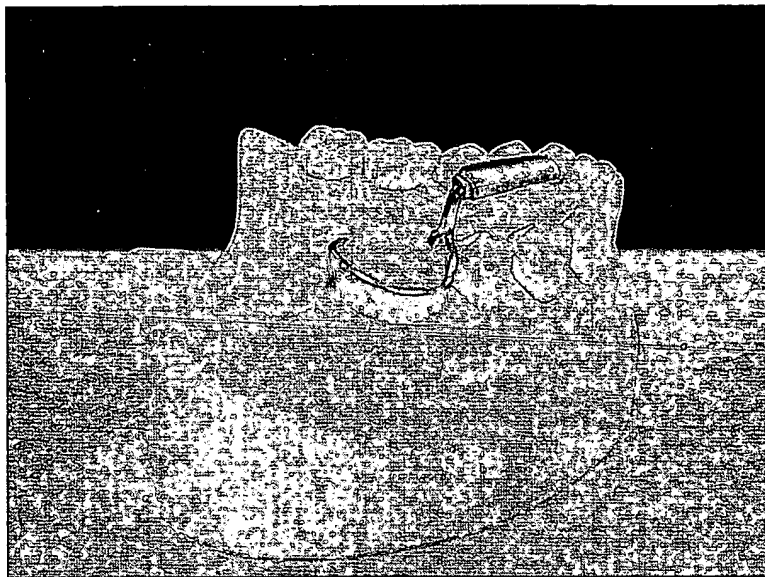
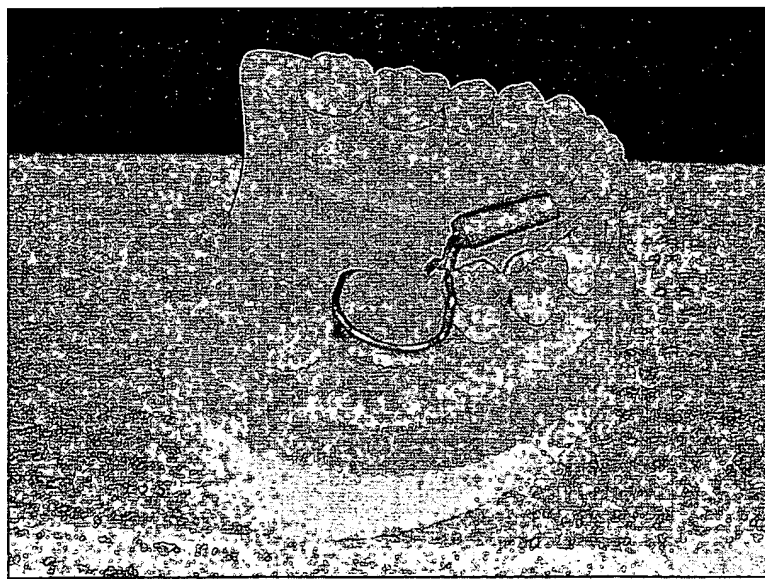


Fig. 16C





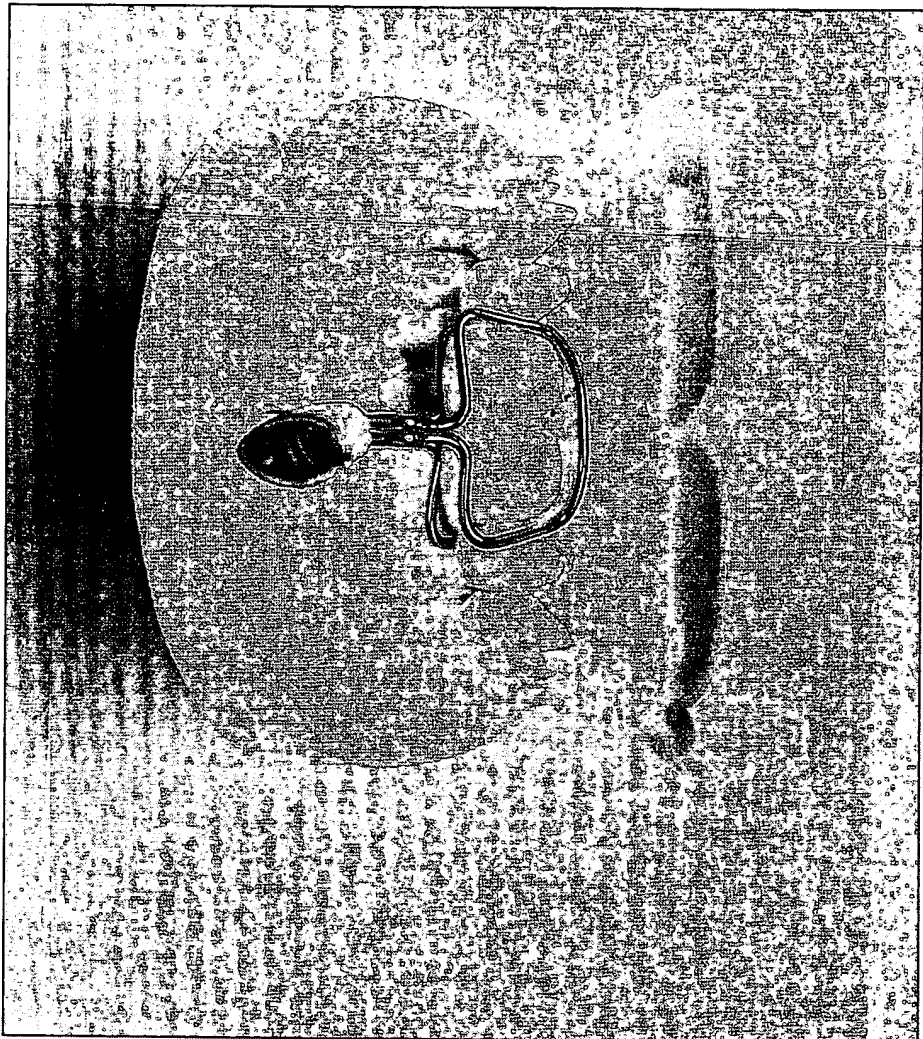


Fig. 17A

Fig. 17B

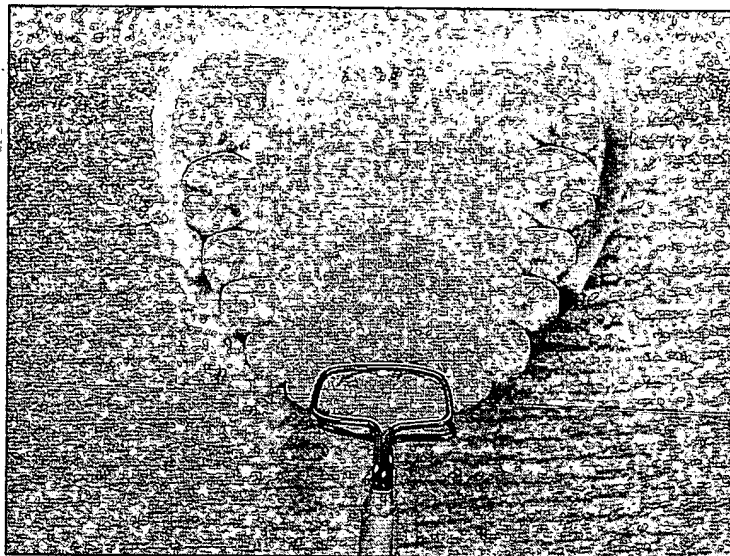
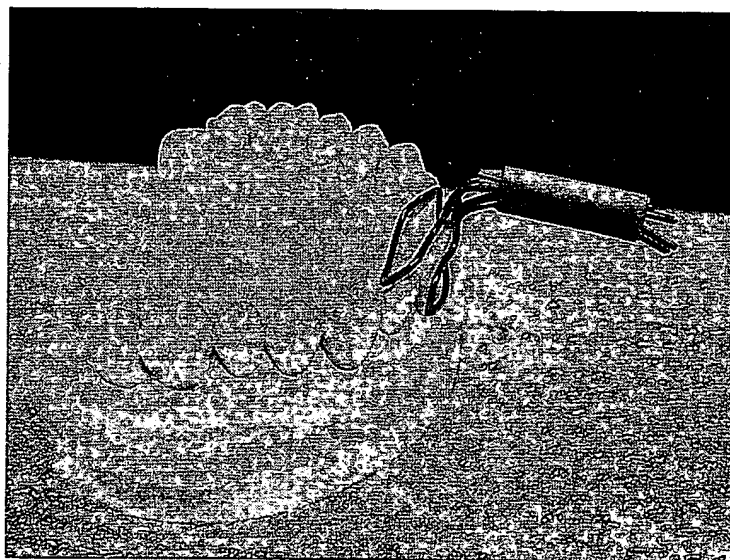


Fig. 17C



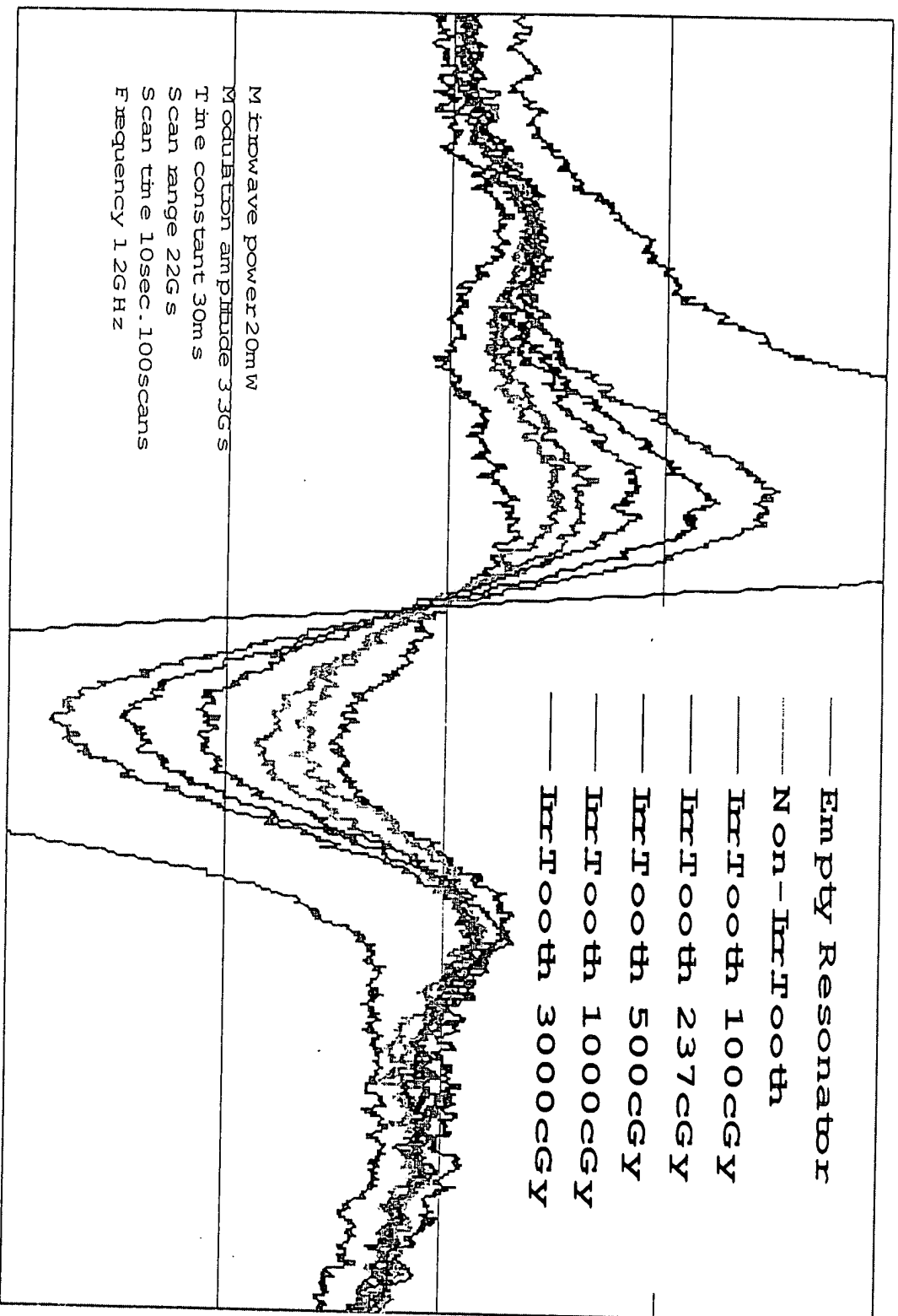


Fig. 18

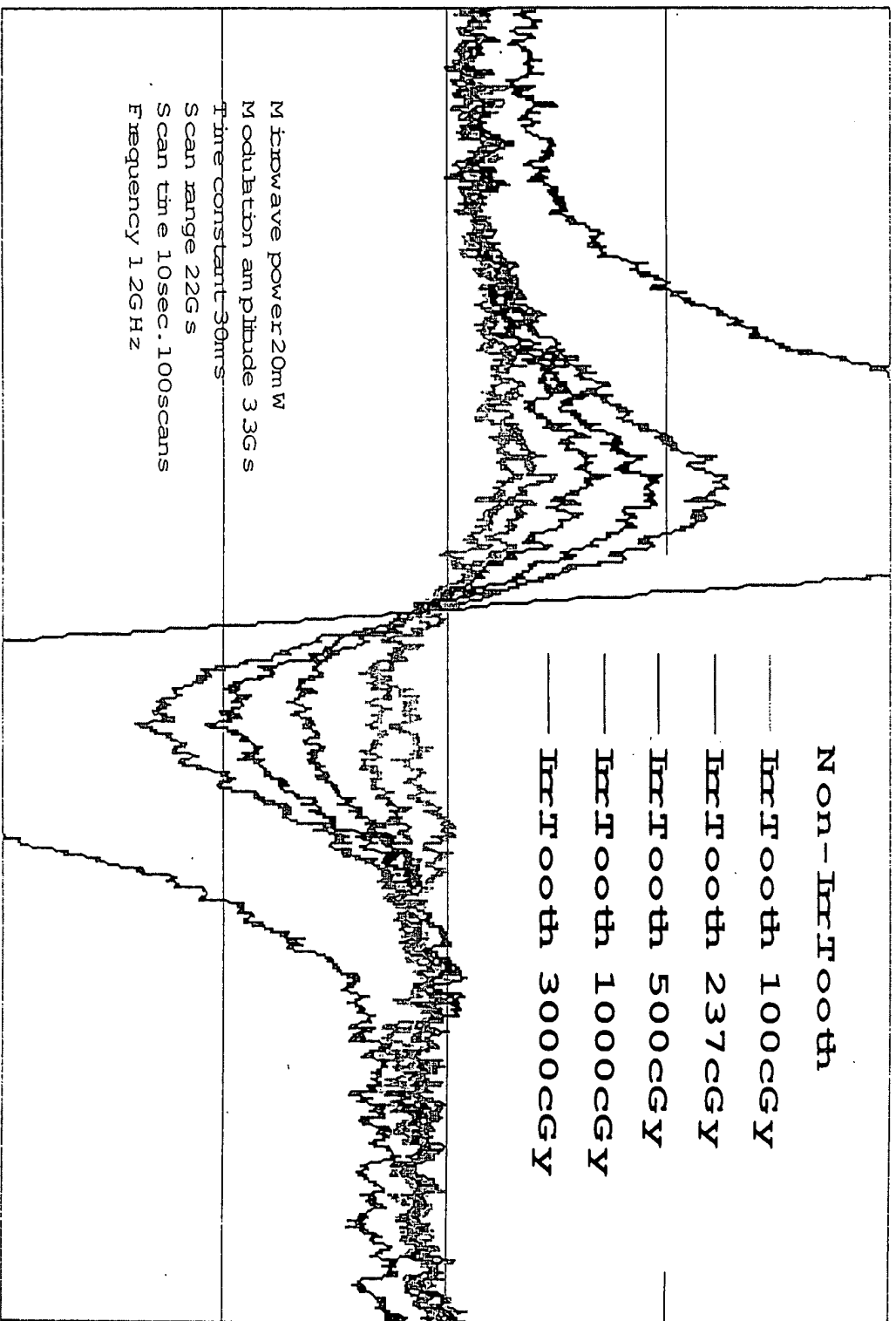


Fig. 19

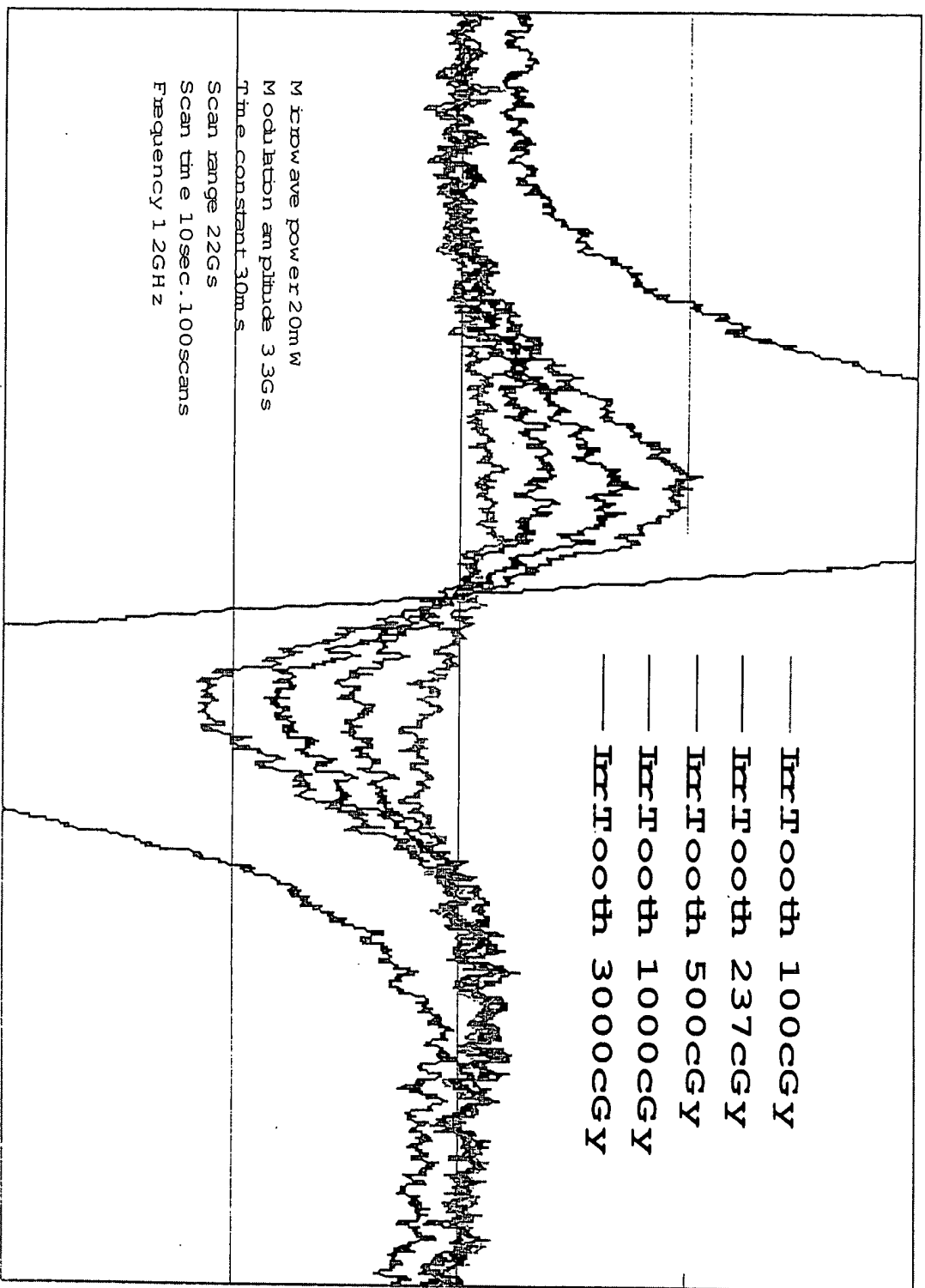


Fig. 20

Fig. 21A

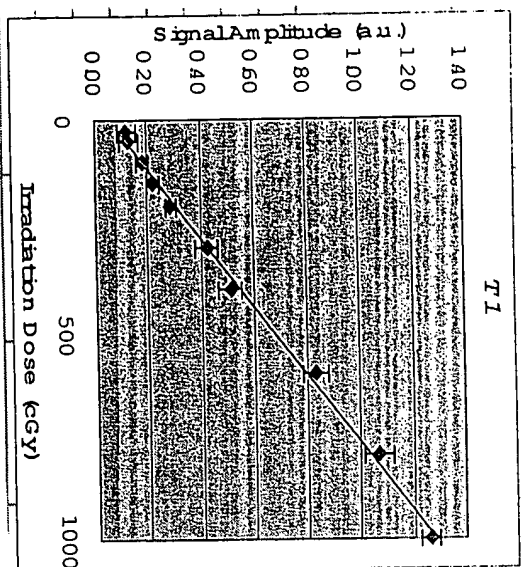


Fig. 21B

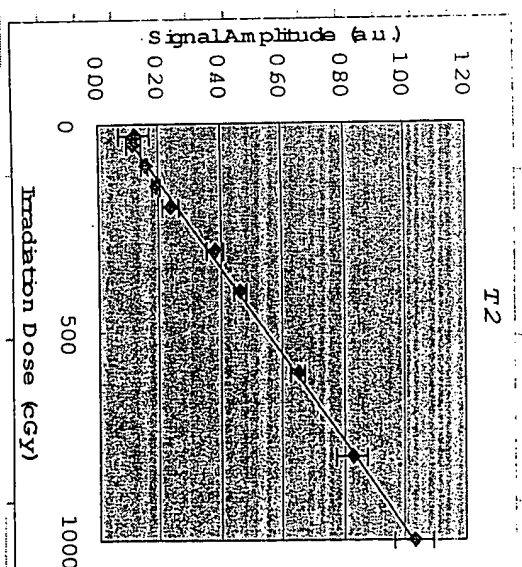


Fig. 21C

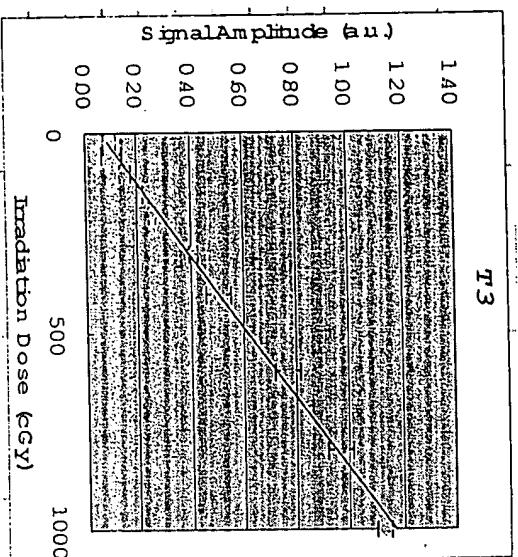
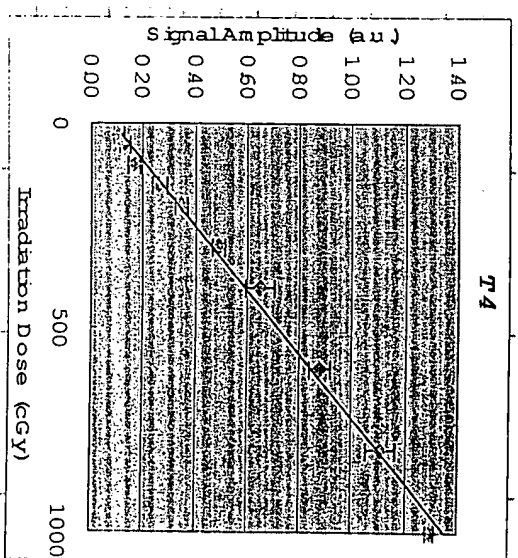


Fig. 21D



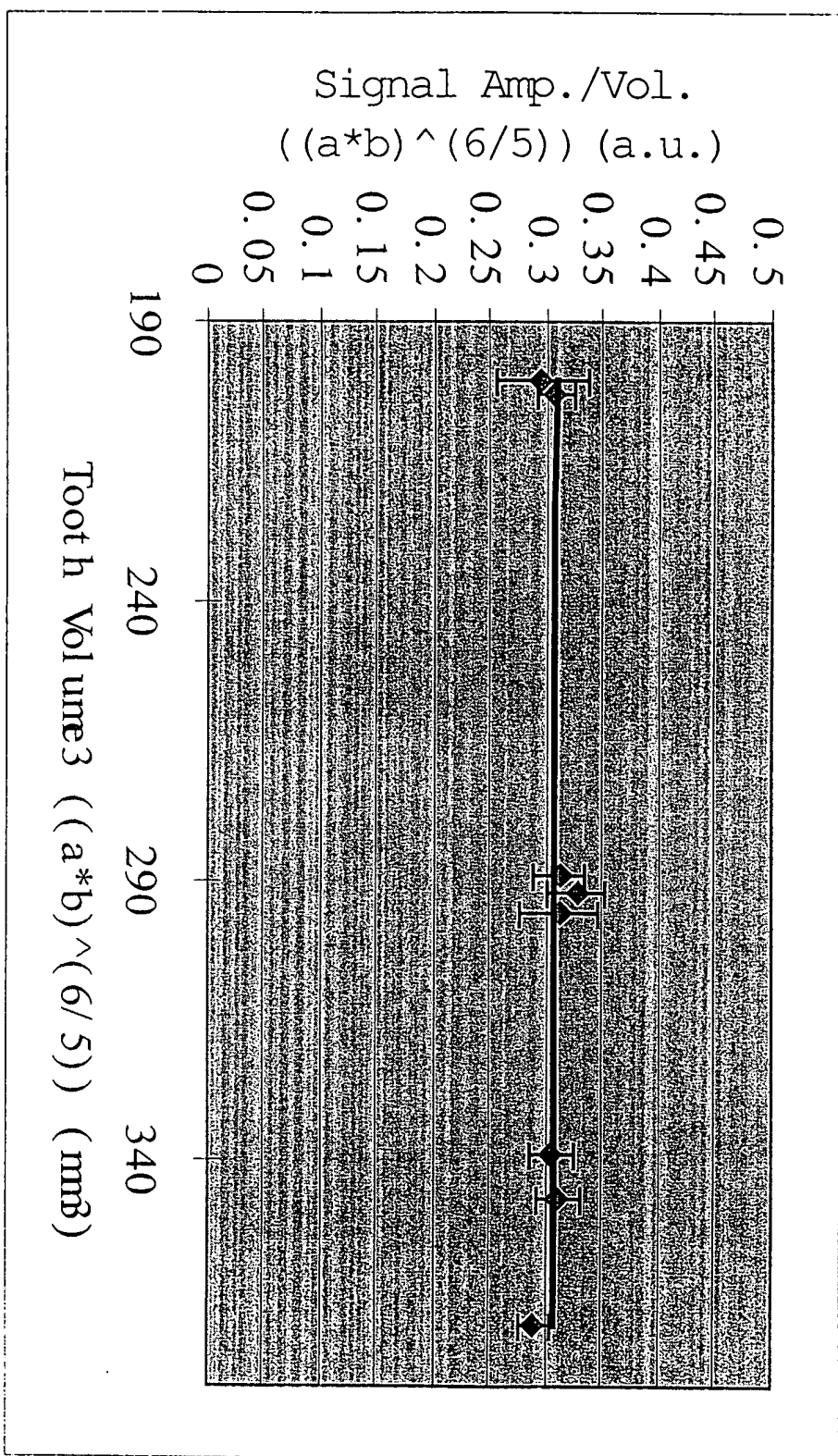


Fig. 22

Fig. 23A

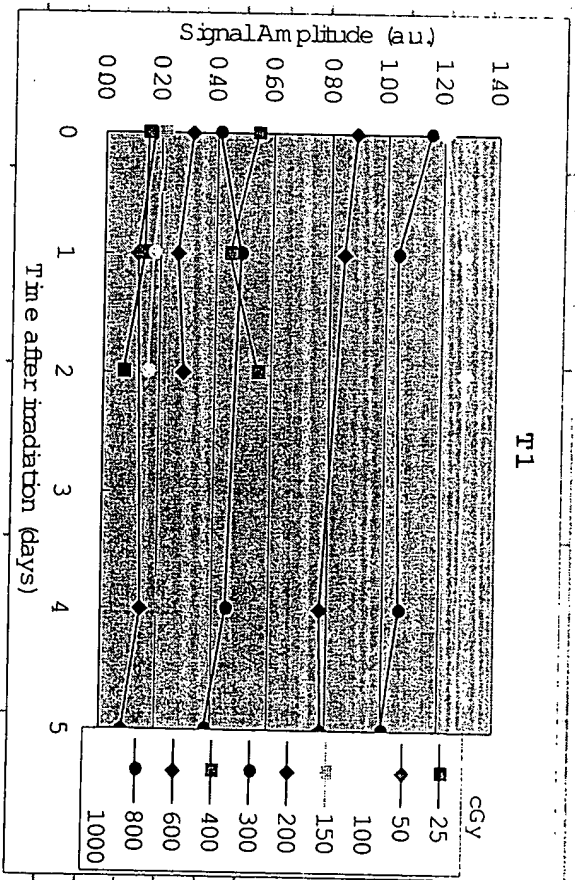


Fig. 23B

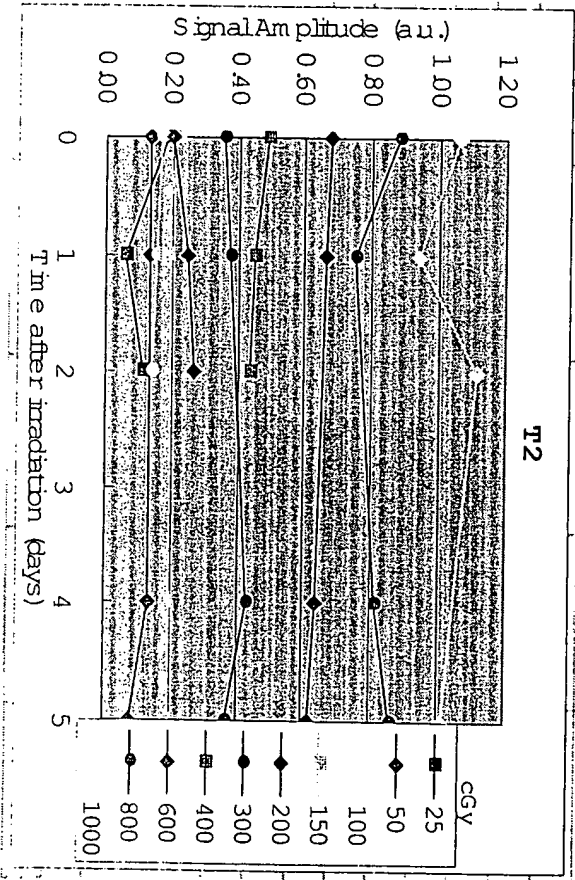




Fig. 23C

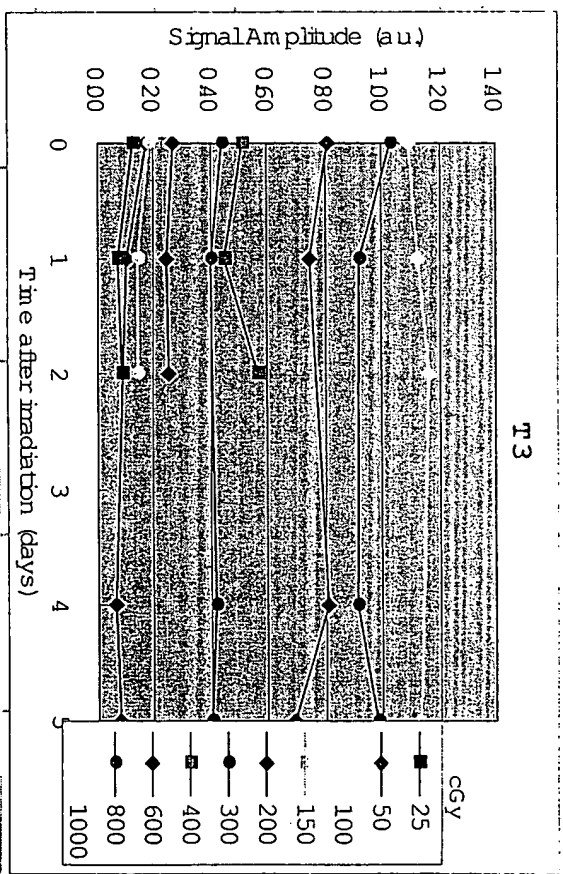


Fig. 23D

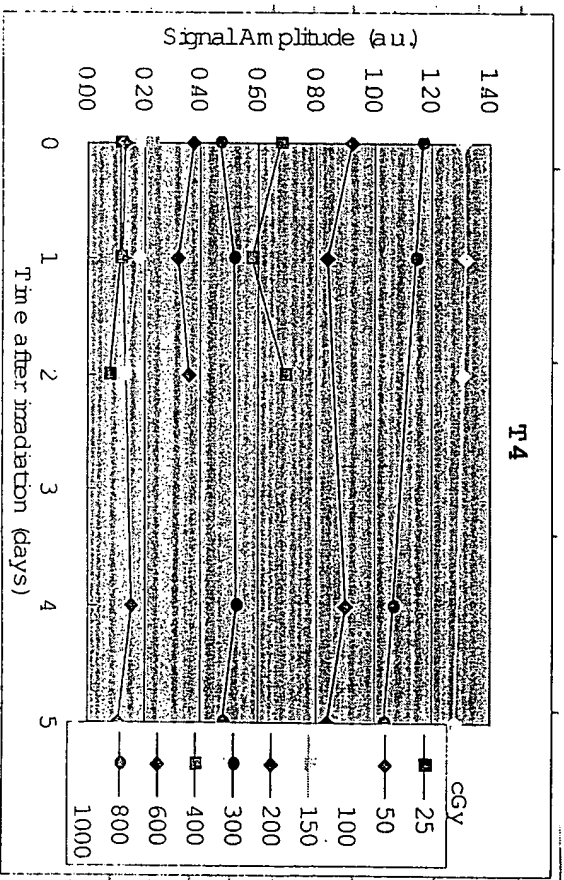


Fig. 24A

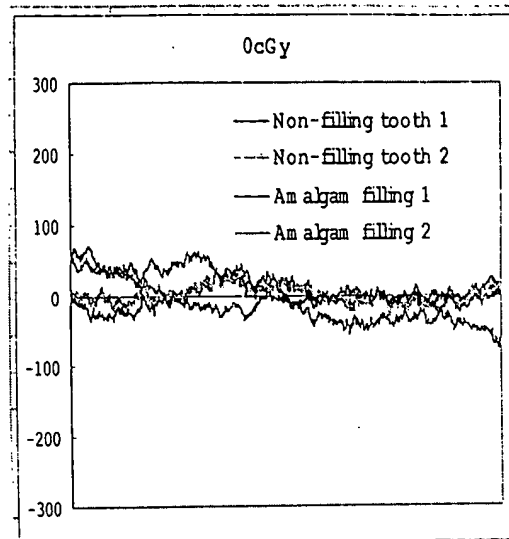


Fig. 24B

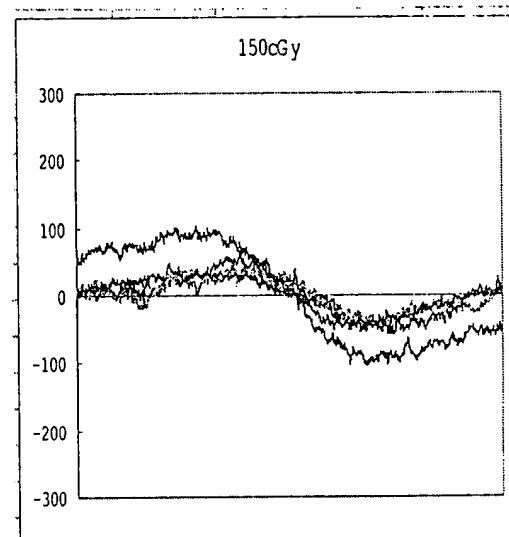


Fig. 24C

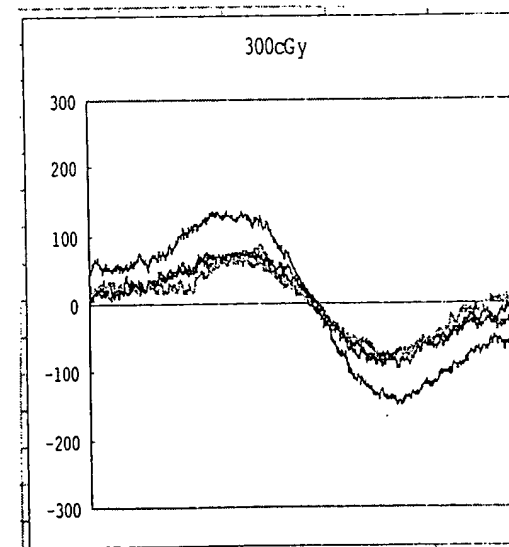


Fig. 24D

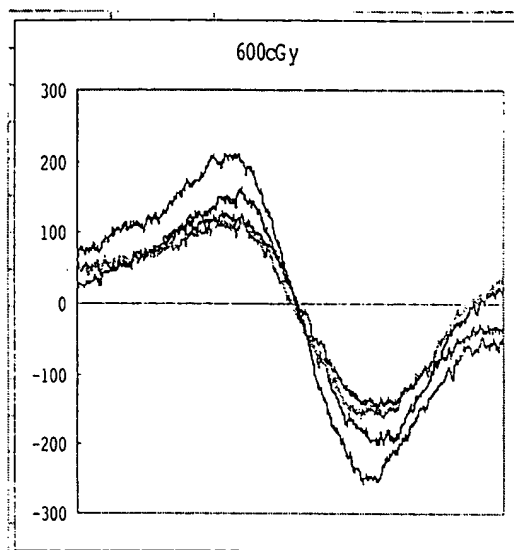
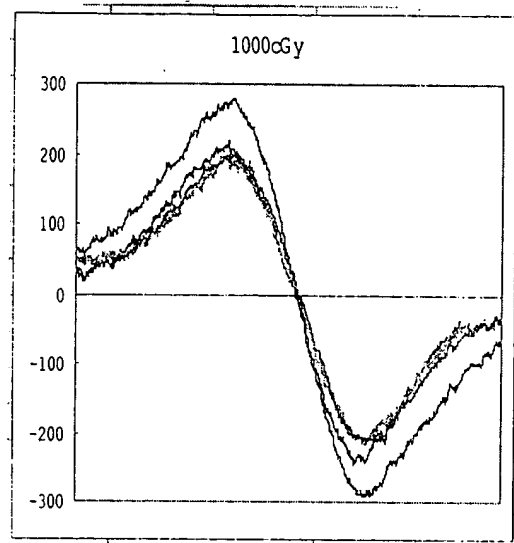


Fig. 24E



Clinical Bridge

Microwave Power 0db

Modulation Amplitude 3.0GS

Time Constant 30ms

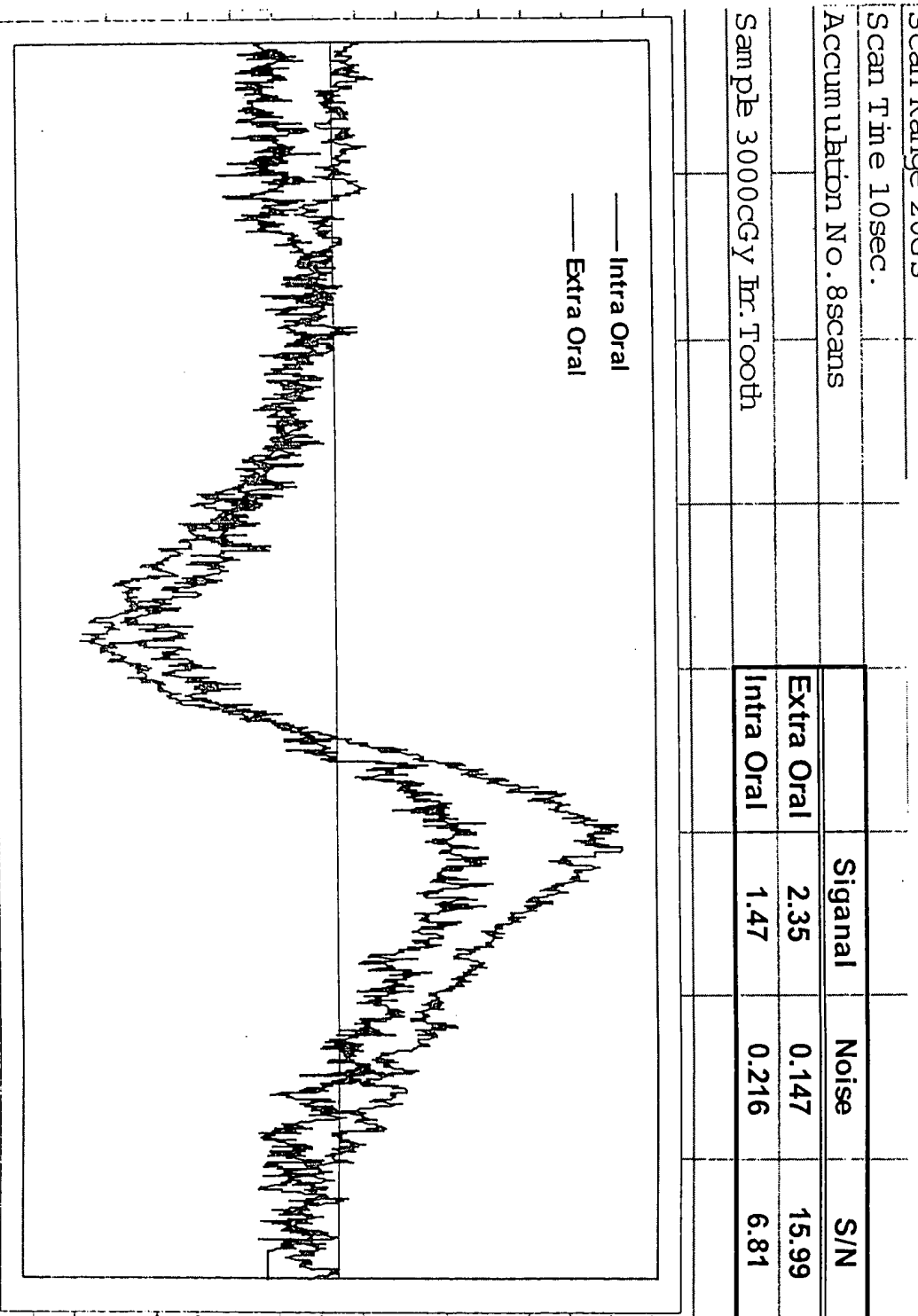
Scan Range 20GS

Scan Time 10sec.

Accumulation No. 8scans

Sample 3000cGY Ir. Tooth

Fi. 25



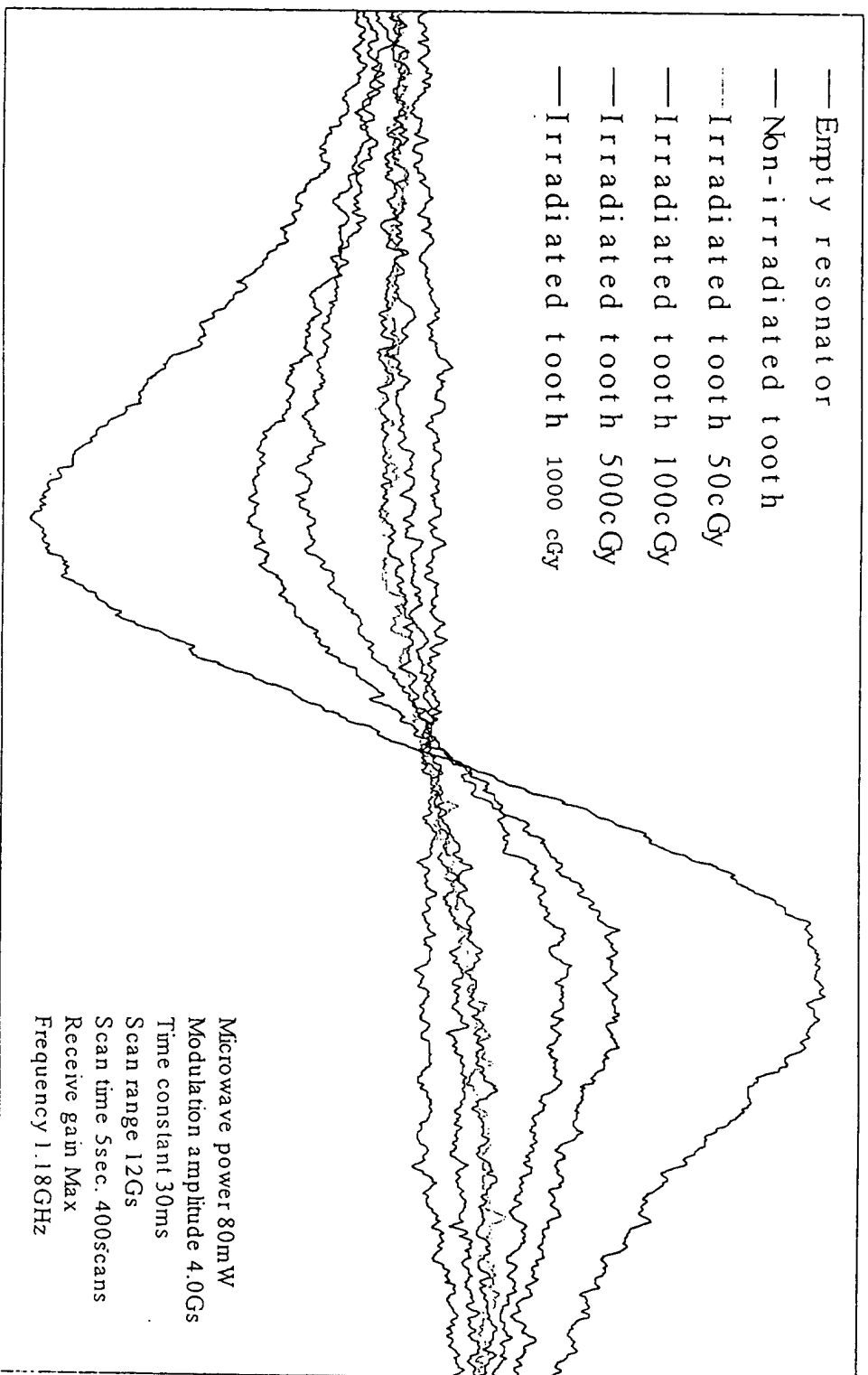


Fig. 26

	BW 1	BW 2	Q-factor1	Q-factor2	Q-factorAve.	SD
OutoralEmpty Resonator	1.95	2.1	600.00	557.1	578.57	21.43
IntraoralLeft Side (Mobar region)	4.6	5.7	254.35	205.3	229.81	24.54
IntraoralRight Side (Mobar region)	5.1	8.9	229.41	131.5	180.44	48.98
IntraoralCenter	3.4	3.9	344.12	300.0	322.06	22.06
IntraoralCenter (Tongue pressed to the bop)	13.7	14.1	85.40	83.0	84.19	1.21

Fig. 27A

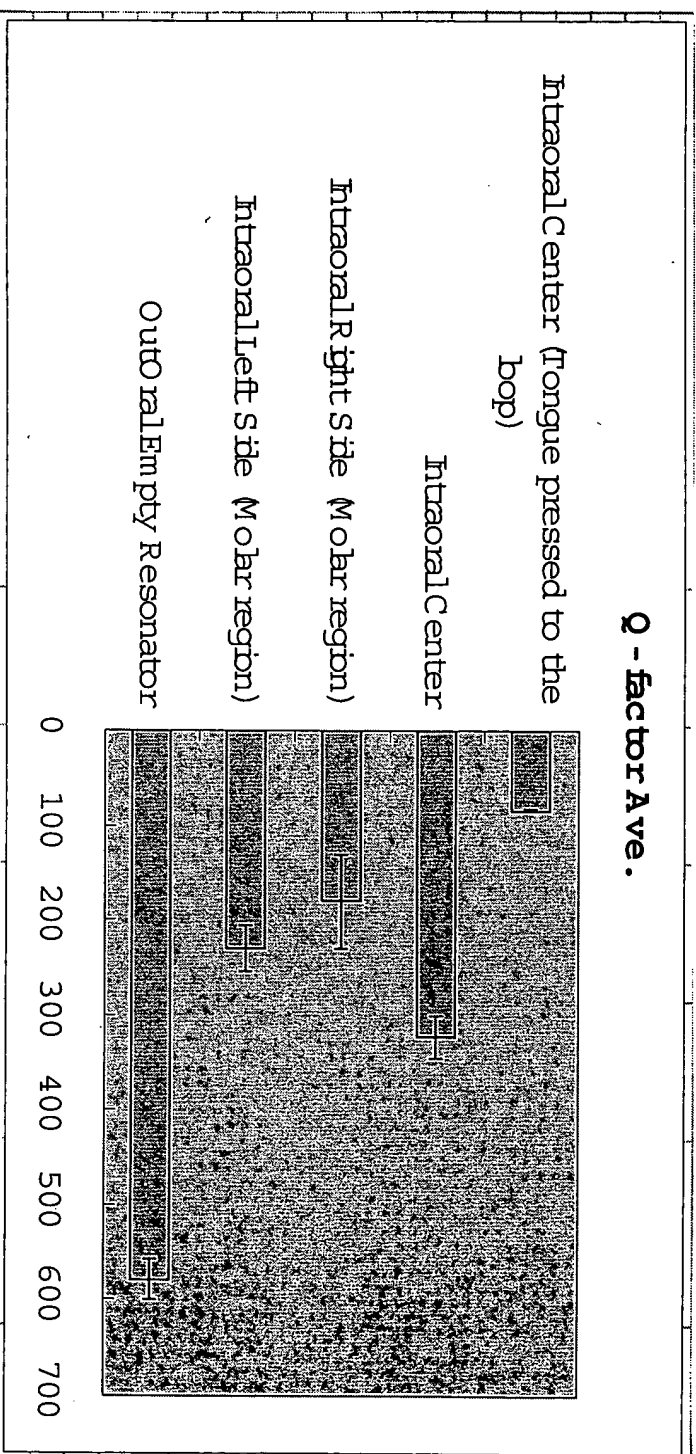


Fig. 27B

Irradiated Tooth (3000 cGy)

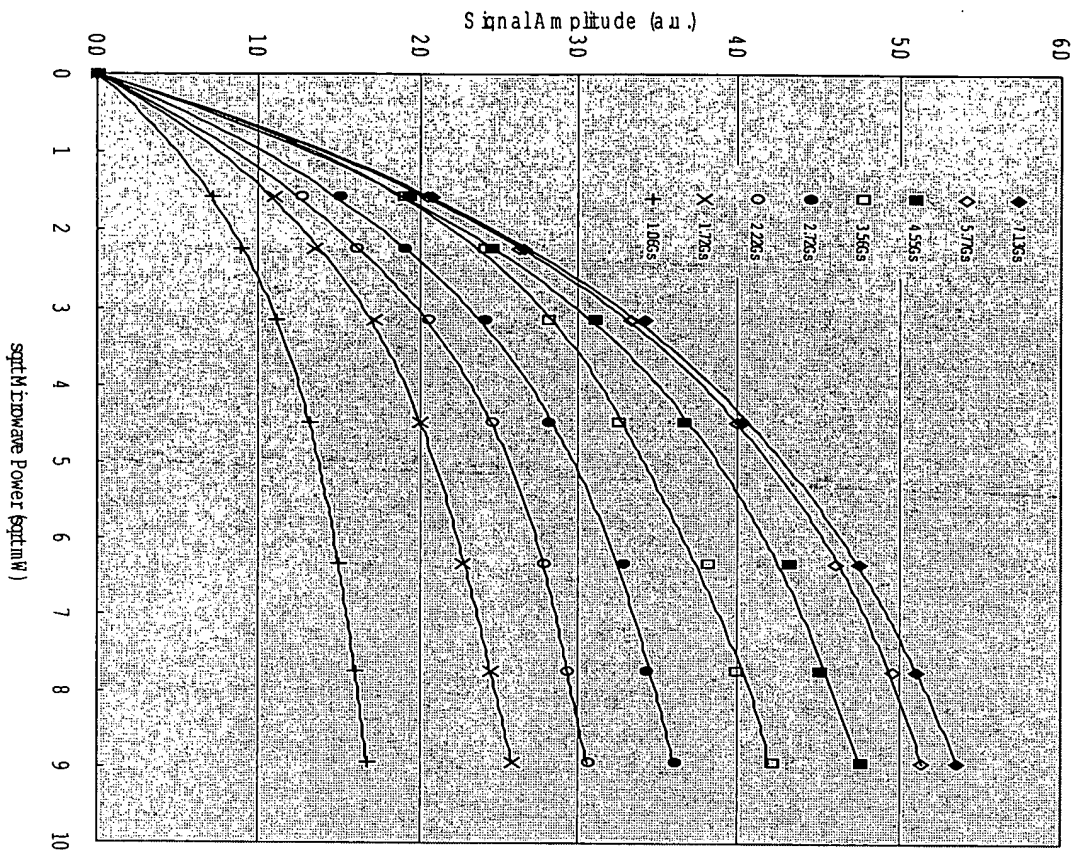


Fig. 28A

Non-Irradiated Tooth

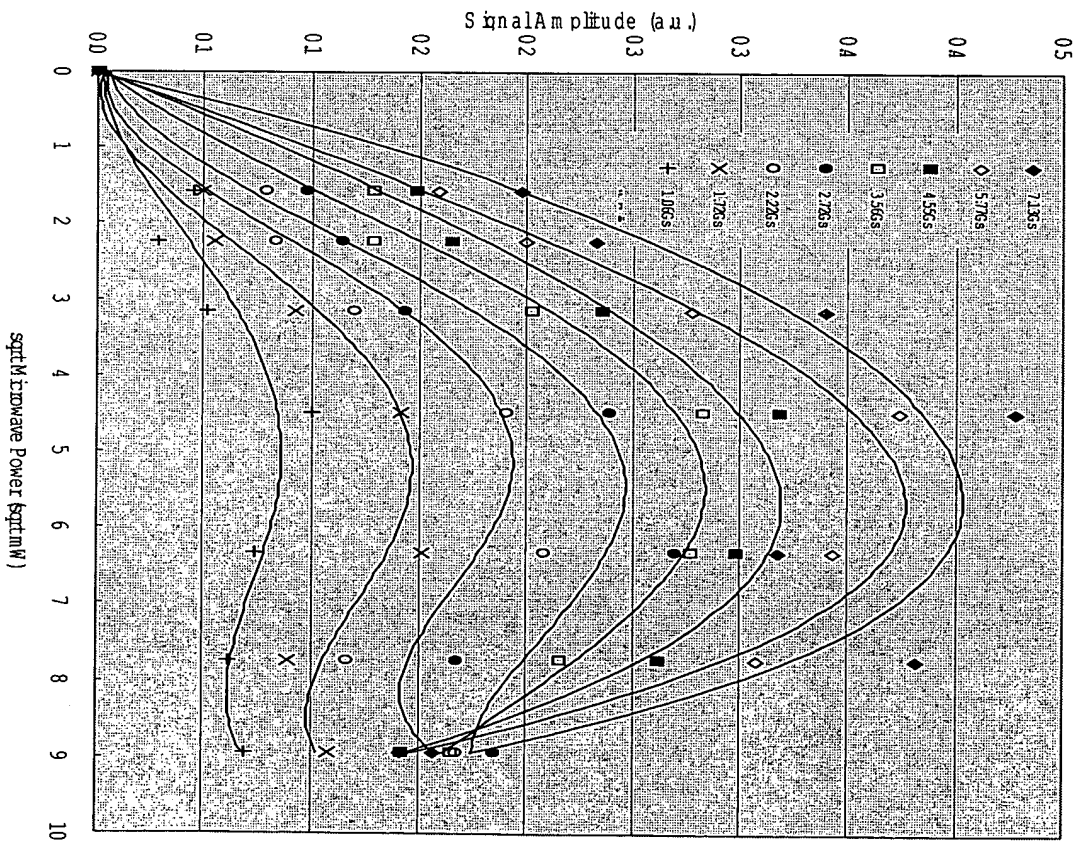
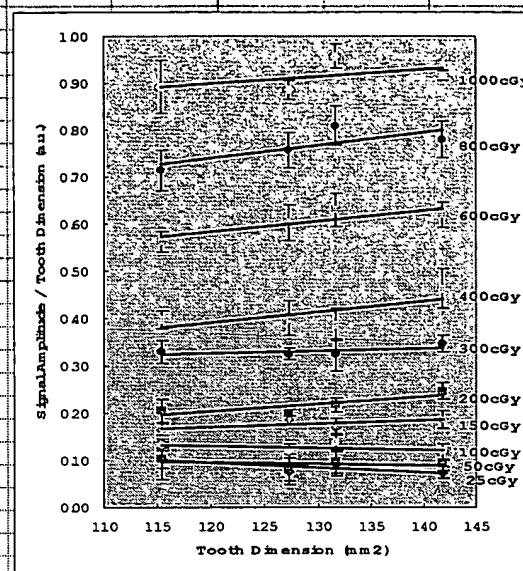
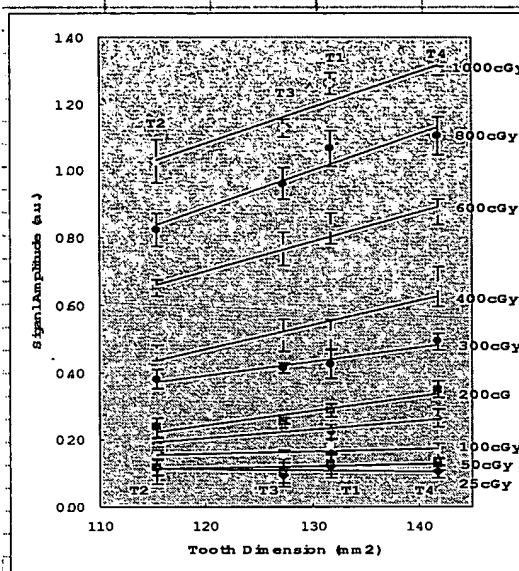


Fig. 28B

Fig. 29A

Fig. 29B

Normalized by tooth dimension (a\*b)



Normalized by (a\*b)^(6/5)

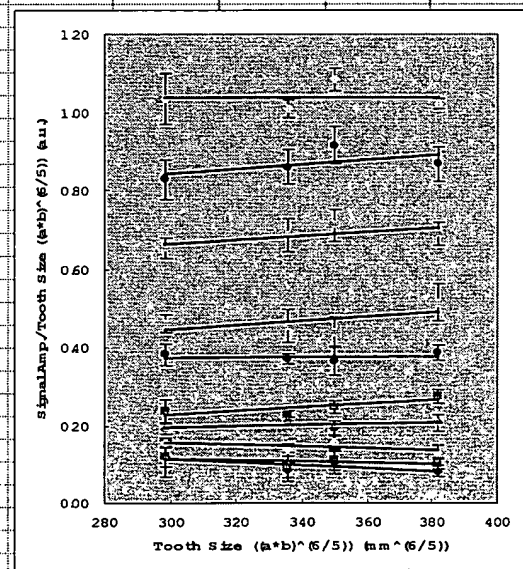
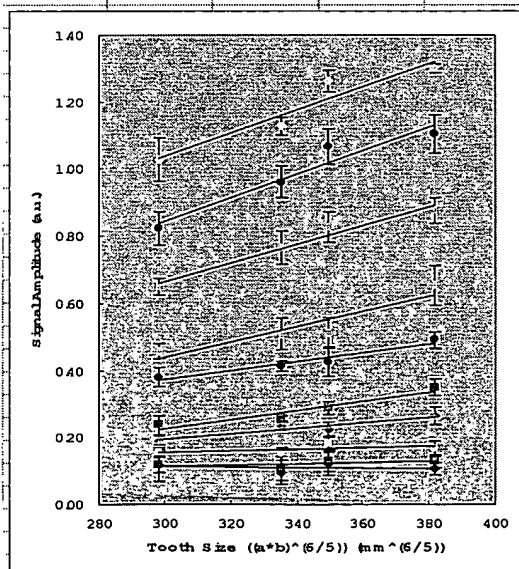


Fig. 29C

Fig. 29D



# EPR Spectra of Human Tooth at L-Band

Fig. 30A

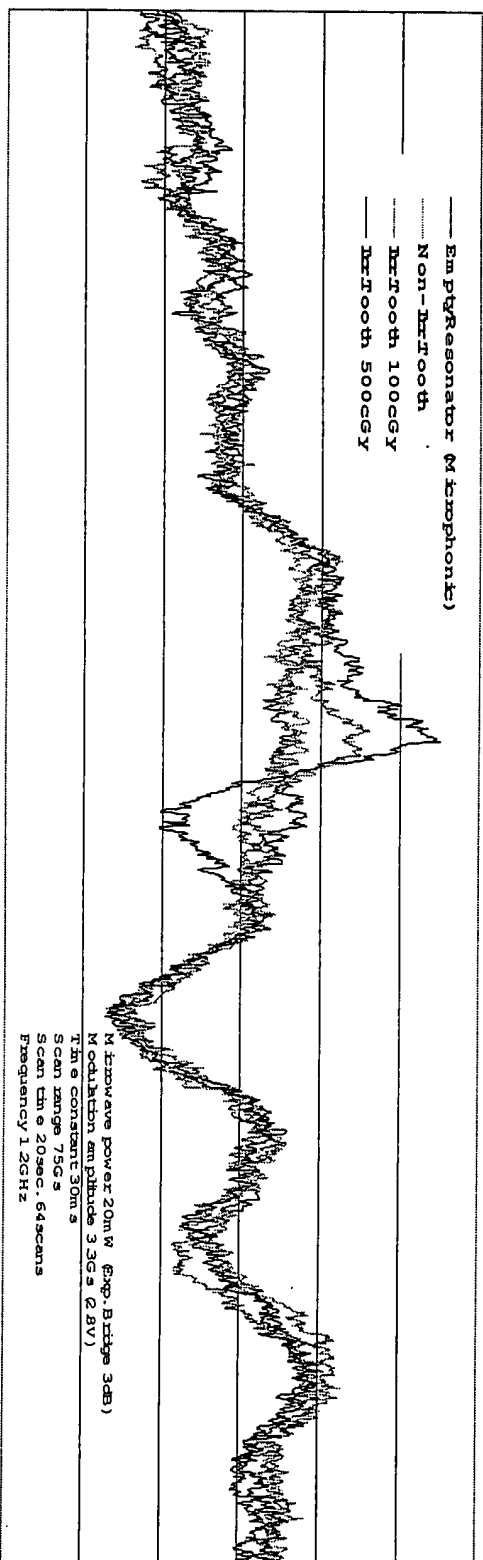


Fig. 30B

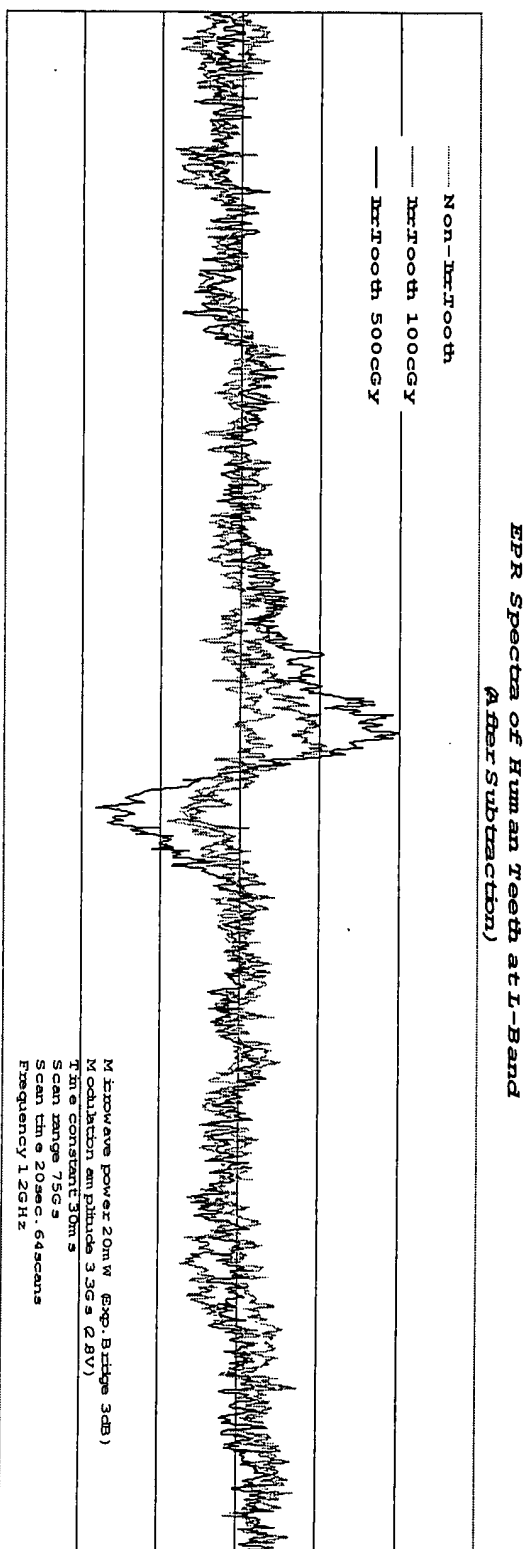


Fig. 31A

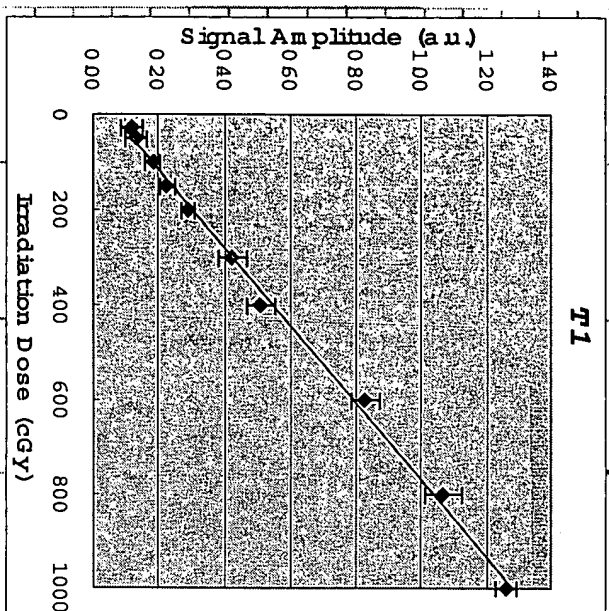


Fig. 31B

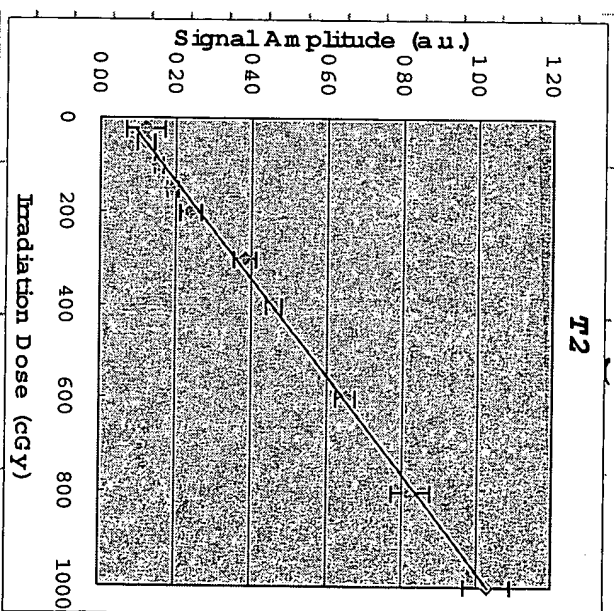


Fig. 31C

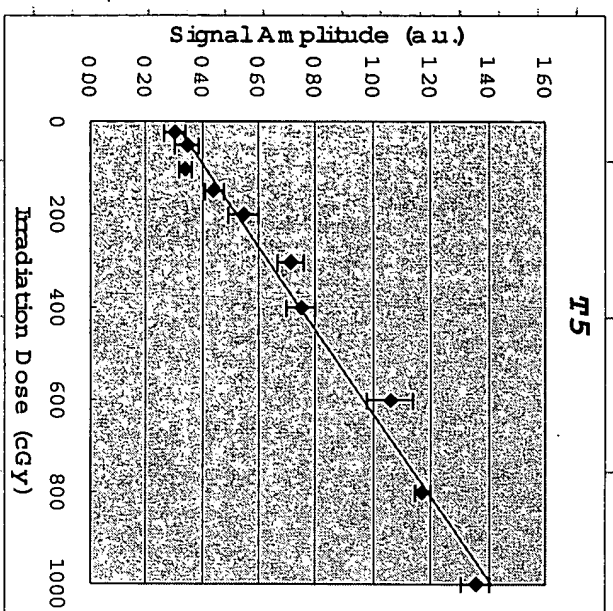


Fig. 31D

